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FREEDOM IN MEDICAL PRACTICE ADDRESS OF THE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION

DWIGHT H. MURRAY, M. D.
NAPA, CALIFORNIA

Almost six months have elapsed since we last met to deliberate and act on medical affairs. The time has passed quickly, but not quietly.

The rumble of war and revolution has resounded in our ears. The din from political battles has been deafening.

All of us . . . sooner or later . . . learn that today's events do not just swirl around us, but involve each of us. As doctors we cannot get away from them by claiming that our only interest is in the sick, and that we cannot be bothered by political, social and economic problems. These matters demand attention from the doctors as well as the lawyer, the businessman, the newspaper editor, the labor leader and the worker.

If we are concerned about what happens on the international, national and local fronts—and we should be—then certainly we cannot afford to be disinterested in what happens in our own area of health and medical affairs. Yet there is apathy in our ranks.

* Presented at the opening session of the House of Delegates at the Clinical Meeting of the American Medical Association, Seattle, Washington, November 27, 1956.

REPLACE APATHY WITH ACTIVE, UNITED PROFESSION

Today there is a greater need for a united, forceful and informed profession than ever before. We have been caught in the throes of a social revolution which demanded something for nothing. Changes have been taking place all around us, and medicine has not escaped unscathed.

For example, in a few days Public Law 569, the bill providing medical care for military dependents, becomes effective throughout the land. Contracts already have been signed with the government by the majority of our state societies. No longer can any doctor claim that this law does not affect him. No longer can he say that government laws really are not changing the practice of medicine.

Public Law 880, better known to all of us as H. R. 7225, is another case in point. Medicine now is facing the problem of protecting the taxpaying public from abuses and of cooperating with the government to carry out the provisions of the law. The law is now on the books, and we must provide the leadership necessary to make it work as well as possible.

It was encouraging to hear Ezra Taft Benson, Secretary of Agriculture, say last week before the American Association of Land Grant Colleges and Universities:

"Sooner or later, the accumulation of power in a central government leads to a loss of freedom . . . Raids on the federal treasury can be all too readily accomplished by an organized few over the feeble protests of an apathetic majority. With more and more activity centered in the federal

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government, the relationship between the cost and the benefits of government programs becomes obscure. What follows is the voting of public money without having to accept direct local responsibility for higher taxes . . .

"If the present shift of power from state to federal authority which started 25 years ago is allowed to continue, the states may be left hollow shells."

It was encouraging to hear such comments from a member of the President's Cabinet. I only wish that all members of the official family, and more important, every member of the United States Congress, felt the same way.

The expression of this philosophy, with which medicine so heartily agrees, sounds good, but putting it into practice is the thing we are really interested in.

Today the medical profession along with business and industry is caught between those who desire to promote sound government programs and those who desire even more intensely to perpetuate party power. Unfortunately, in recent years a benevolent federal government appears more attractive to the voting public than the preservation of individual freedoms. Medicine must do its utmost to reverse this trend.

MEDICAL FREEDOM ESSENTIAL

In my travels around the country as your representative the last eighteen months, I have seen little dissension or rancor within our ranks. However, I must report that I have seen too much complacency over governmental encroachment into medical affairs. And I am deadly serious when I say to you that apathy by the few, or by the many, can be detrimental to all.

No nation can merely reap the benefits of freedom; it also must sow seeds of freedom.

In medicine the situation is the same. If an apathetic medical profession takes its freedom for granted, it will be the beginning of the end. A strong, free profession must work for freedom so that it may live in freedom. And history tells us that once medicine loses its freedom, other fields of private endeavor are immediately in danger.

I do not wish to paint a dark or distorted picture of medicine's free status and its stature in America today. But I do believe words of caution and an appeal for vigilance are in order.

The road of apathy and disunity can only lead to disorder and perhaps disintegration, and we must sound a warning to all our colleagues who don't care, or who are pulling in the opposite direction. The road of alertness, action and unity is the proper road for all of us to be traveling together.

If I had just one wish for the coming year, it would be to command the time and talents of the 160,000 physicians in the American Medical Association. I would set us all to the task of emphasizing and reemphasizing the absolute necessity of patient and professional freedom.

PATIENT'S RIGHT TO CHOOSE HIS DOCTOR

I believe it is one of our prime responsibilities to prove to our patients that their right to choose their doctor is a most important one.

Free choice brings a bond of confidence between doctor and patient which no compulsory medical system can create. It means that the patient knows the physician will be interested in him as a person, not as just a serial number or the 2:45 appendicitis case.

For the doctor free choice means that the patient has selected him for his abilities, training, sincerity and personality. When a patient comes into my office, I know he has made a choice. And from that moment there begins a physician-patient relationship of the highest order. To me the patient is someone special, and I in turn hope that I am someone special to him.

Once the patient has made his choice, the physician automatically assumes an unqualified responsibility to the patient. No system of medical care that uses a third party to bring doctor and patient together can match our kind of cooperative performance for the treatment of illness, the cure of disease and the betterment of the patient's health.

Freedom to select a doctor is part of everyone's great freedom to choose — to choose what he wears and eats; where he works and worships, and how he votes. Take away any part of this freedom and great damage is done to our democratic system.

FREE CONDUCT IN MEDICAL TREATMENT

Another freedom closely tied to freedom of choice is freedom in the conduct of medical treatment.

At the recent meeting of the World Medical Association in Havana, Cuba, Dr. Rolf Schloegell of Germany made a stirring defense of free conduct of medical treatment. He told us that the medical profession believes the attending physician alone is competent to decide what measures he deems necessary and will apply in order to bring about the desired improvement. He warned too of the danger of excessive restriction on the freedom of the patient and the attending doctor.

Yet the trend toward extending social security in the medical care field has been steady and has accelerated since the end of World War II.

The dangers of shifting responsibilities for medical care from the patient and doctor to the government are obvious. The caliber of medical care cannot be as high when both patient and doctor are dependent upon government. Initiative succumbs to dictation, and self-reliance is replaced by the crutch of government.

We do not deny that there is an area of legitimate concern by the government for the health and welfare of the people. But each year government seems to extend that area. We get some idea of this expansion from the new federal medical budget.

This year, according to our Washington Office, the average family will be paying $54.61 for the U. S. Government's health and medical activities. And the total expenditures this year amount to 2½ billion dollars—290 millions more than last year. Even in an overall federal budget of 61 billion dollars, the total cost of 2½ billions is not insignificant. It is a billion dollars more than the cost of running the Commerce Department, half a billion more than the Agricultural Department and six times more than the Interior Department's budget.

Many expenditures obviously are necessary to keep up our unsurpassed public health standards, and research may pay rich dividends in scientific discoveries. But there is no doubt that much money is being spent on medical activities that should not involve government participation.

The trend is to spend more and more government money on health and medical matters because it is good politics. Apparently many Americans still want to see government in the role of a big brother, dishing out so-called gifts and bargains under the guise of benevolent economic planning.

I believe it is our duty, as it is everyone else's, to combat the attitude of "what's in it for me?" and to promote the long-honored creed of "what's best for all Americans and our free society." I think that a nation can drift into state medicine inch by inch just as surely as if the scheme were foisted upon a people overnight. The "drift" method may take longer but the result will be the same.

So it is time all of us sounded the alarm against soft and superficial security against the invasion of personal responsibility. It is time we stood up together for militant freedom and for full rights and responsibilities of the individual.

BELGIAN DOCTORS TURN BACK GOVERNMENT

There is no better example of what a unified medical profession can do than in the story of the recent fight of the Belgian doctors against the government's proposals for a state service of medicine.

Without consulting the medical profession the Belgian government proceeded to draft rules and regulations of health to be incorporated in the nation's social security legislation. Under the proposals doctors were to sign an agreement to abide by the

present rules and any later regulations. For the patient there would be the usual red tape in getting medical care.

When the Belgian doctors learned of the scheme, they met in conference with the government. They told the government what they wanted and what they would not accept. The government agreed.

For several months everything was quiet. Then the Belgian doctors suddenly read about the new health bill that the government was sending to Parliament. It was quite contrary to the earlier agreement worked out by the profession and the government. But the bill was passed quickly.

The Belgian medical profession protested and said it would not be placed under the Ministry of Labor. Instead the doctors proposed to set up their own plan of medical assistance.

Before long, the government saw that the medical profession meant business and that the doctor's plan was an attractive one. So it declared that its own bill was not in force and could not be in force without the consent of the medical profession.

To me this fight against legislative intervention in medical care is excellent evidence that the profession can defend itself if it unites to defend the basic principles of freedom and if it offers constructive proposals. By using the Belgian national motto, "in union there is strength," the medical profession showed doctors everywhere that dangerous government plans can be turned aside by the strong.

I also read recently in the Journal of the World Medical Association of the fight of the medical profession of Malta against a British government scheme to introduce a full-time salaried medical service, without the right of private practice, on an island dependency of Malta. Here again the doctors reacted with unity and strength, and successfully thwarted the government's plan.

There is a lesson in these stories from Belgium and Malta. They prove that a unified profession has a great political power for good—the good of the patient, the doctors and the nation.

CONFIDENCE OF PATIENTS, UNDERSTANDING OF LEGISLATORS NEEDED

While we are developing unity within our own ranks, I believe it is equally important to continue to build up the confidence and respect of our patients, and to make our legislators aware of the necessity for freedom in medical practice.

Let us never reduce the quality of service we render to our patients, and never lose the personal touch in medicine. Where there is any opportunity to improve upon our medical care, let us seize it and show our abilities to do an outstanding job. Satisfied patient-customers will give us deserving support when we need it.

We should realize that the destiny of medicine can be determined to a large degree in the halls of Congress. If this be true, then it is even more important that we take an even greater interest in those who elect the Congressmen. Sympathetic understanding of our position by federal legislators through the voting public will be an insurmountable deterrent to the forces supporting state medicine.

The day has come, gentlemen, when we can no longer look upon medical economics and social changes merely as issues to be considered during our limited leisure hours. Our interest in them cannot be superficial or intermittent.

We now must pay daily attention to these matters. Medical socio-economic affairs can no longer be just incidental with us. They must be a vital part of our life and of our profession.

Each of us, I believe, should dedicate himself to the words included in the oath of office taken by Presidents of the A.M.A.

"I shall champion the cause of freedom in medical practice and freedom for all my fellow Americans."

As doctors, representatives to the A. M. A. and as spokesmen for the A.M.A., let's remember these words and live by them. And to alter a phrase of President Lincoln's only slightly: Let's make common cause to keep the good ship of medical

freedom on this voyage, or nobody will have a chance to pilot her on another voyage.

THE ACUTE ABDOMEN *

HARWELL WILSON, M. D.
MEMPHIS, TENN.

The acute abdomen is a subject of vital interest to most practicing physicians. We may be called upon at any time to see a patient who is suffering from severe abdominal pain, the exact cause of which is not readily apparent. On a number of occasions, the decisions made in such a case by the responsible physician may greatly affect the patient's chance of recovery. Since there are no empirical rules or laboratory tests by which one may definitely establish a diagnosis, the problem becomes one of clinical judgment. At times the proper decisions in such cases may appear to be based primarily upon hunch; however, the experienced clinician carefully weighs the evidence gained from the history, physical examination, x-ray and laboratory studies. Often changes in the findings exhibited by the patient in the course of a few hours of careful observation may present the clue which helps solve the problem.

In this presentation some of the important principles relating to the establishment of the diagnosis in such patients will be reviewed. It was Pasteur who once said "In the field of observation chance never favors the unprepared mind". Therefore, if we continue to keep in mind the salient features of the problem we are much more likely to successfully manage our patients who have acute abdominal symptoms.

REFERRED PAIN

Pain is one of nature's most valuable signs since it immediately calls attention to the fact that something is wrong. All of us know, however, that the trouble is not necessarily at the area where the patient is experiencing the greatest discomfort. Fortunately, the characteristic patterns of referred pain are often very helpful in establishing a diagnosis in patients with acute abdominal symptoms. Inflammatory disease in the appendix is often associated with either generalized or upper abdominal discomfort, in the early stages, and may only after a period of hours become localized in the right lower quadrant. The typical radiation of pain from the area of the kidney, along the course of the ureter to the external genitalia which is often seen in patients with nephrolithiasis is diagnostic and the proper recognition of this type of pain makes the difference between having the abdominal cavity opened or not in many patients. Similarly, gallbladder pain is frequently referred to the right scapular region.

Irritation of the diaphragm in many cases causes the patient to complain of great discomfort in the lower cervical region just above the clavicle. This may be a most helpful sign in certain difficult cases. I can recall an elderly woman, the mother of a prominent dentist, whom I saw in consultation about 10 P.M. in the hospital. This patient's complaint at the time was of rather generalized abdominal discomfort associated with slight distention, generalized tenderness but no rigidity. She was known to have diabetes and heart trouble and was said to have had gallbladder trouble demonstrated some years before. We considered the possibility of acute cholecystitis but the findings were not at all definite. Four hours later the patient began to complain of severe pain in the left lower neck and in the shoulder region on the left side. The pulse rate increased, the abdominal pain became more severe, and there was some increase in the distention. The referred pain caused us to feel the patient was suffering from irritation of the diaphragm secondary to a bile peritonitis. The abdomen was opened an hour later

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From the Department of Surgery of the University of Tennessee College of Medicine, Memphis, the Baptist Memorial Hospital, and the John Gaston Hospital, Memphis, Tennessee.

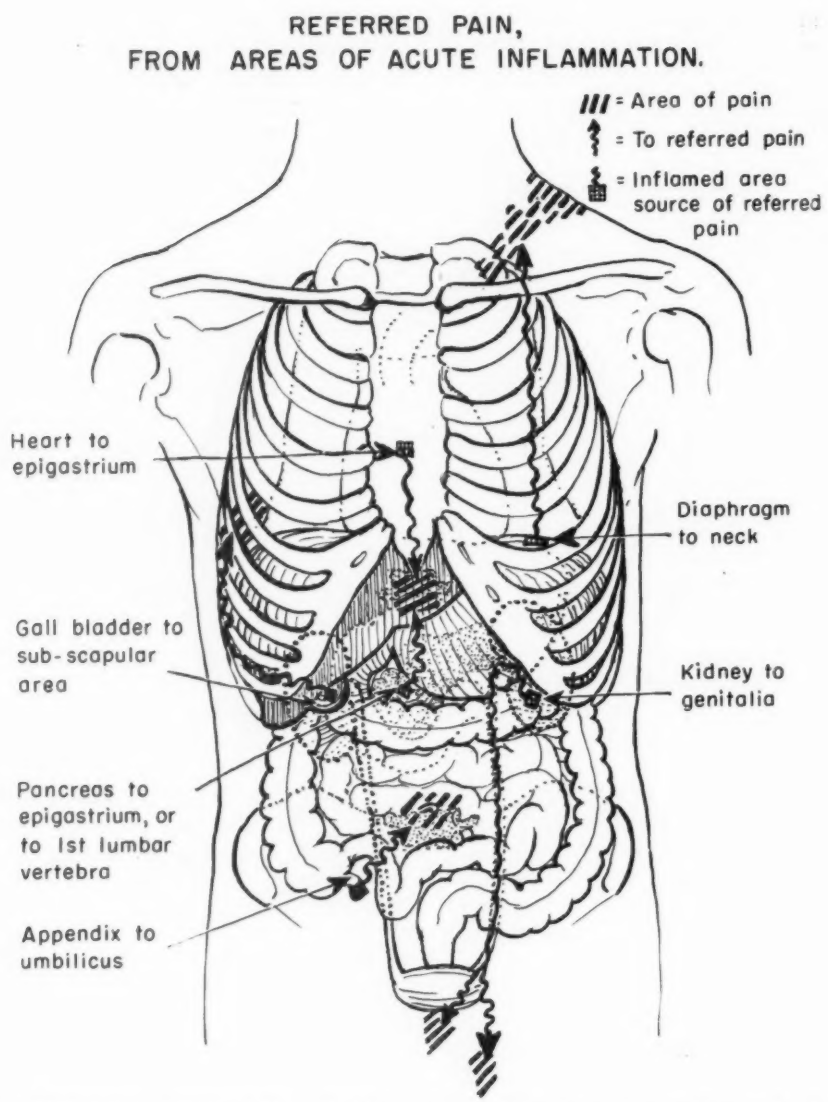
REFERRED PAIN,
FROM AREAS OF ACUTE INFLAMMATION.
= Area of pain
= To referred pain
= Inflamed area source of referred pain
Heart to epigastrium
Diaphragm to neck
Gall bladder to sub-scapular area
Kidney to genitalia
Pancreas to epigastrium, or to 1st lumbar vertebra
Appendix to umbilicus

Figure 1. Diagramatic representation showing some of the more common patterns of referred pain.

and the recently ruptured gallbladder with a large amount of bile in the free peritoneal cavity and beneath the left diaphragm was found. Recovery followed aspiration of the bile from the abdominal cavity and the suturing of a catheter into the gallbladder.

Pain produced by acute pancreatitis is usually in the epigastrium, very severe, and often radiates through to the back in the region of the first lumbar vertebra. This pain may be indistinguishable from that produced by a duodenal ulcer which is perforating into the head of the pancreas. In such a case, a significantly elevated serum amylase, if in the early course of the disease, may establish the diagnosis as pancreatitis. Unless there is good evidence of biliary tract disease in such cases, the patient had best be treated by conservative measures.

Coronary thrombosis in certain cases is

associated with severe epigastric pain. Often there is associated distention and frequently upper abdominal tenderness is present. Such patients may exhibit paralytic ileus which occasionally causes such a patient to be operated upon under a mistaken diagnosis of intestinal obstruction. Similarly, coronary disease may at times mimic gallstone colic. If the clinician is aware of these possibilities, he is less apt to reach the wrong conclusion in a given case.

In most instances the cause of the pain being felt at a site distant to the pathologic trouble is related to the development of the nervous innervation of the area but this is not always the case.

The patient with physical findings suggesting acute appendicitis may actually have a perforated duodenal ulcer and gastric juice which has accumulated in the right lower quadrant may be producing all the symptoms. A careful history will at least help the surgeon who has gone in for an appendix in such a case quickly to recognize the presence of gastric secretion and to investigate the area of the duodenum. Pain in the right side associated with hematuria in most cases signifies urinary tract disease. In some instances, however, an acutely inflamed appendix which overlies the ureter may be the cause of the hematuria.

ROENTGENOLOGIC AID IN DIAGNOSIS

In certain cases the x-ray film may give the answer in a short period of time, such as establishing a diagnosis of ureteral lithiasis in a patient with excruciating flank pain and hematuria.

The presence of free air under the diaphragm as seen in an upright chest film of a patient who may have a peptic ulcer tells us definitely that a perforation of a hollow viscus is present. The absence of

SITES OF POSSIBLE INTRA-ABDOMINAL HEMORRHAGE, WITH BLEEDING INTO PERITONEAL CAVITY.

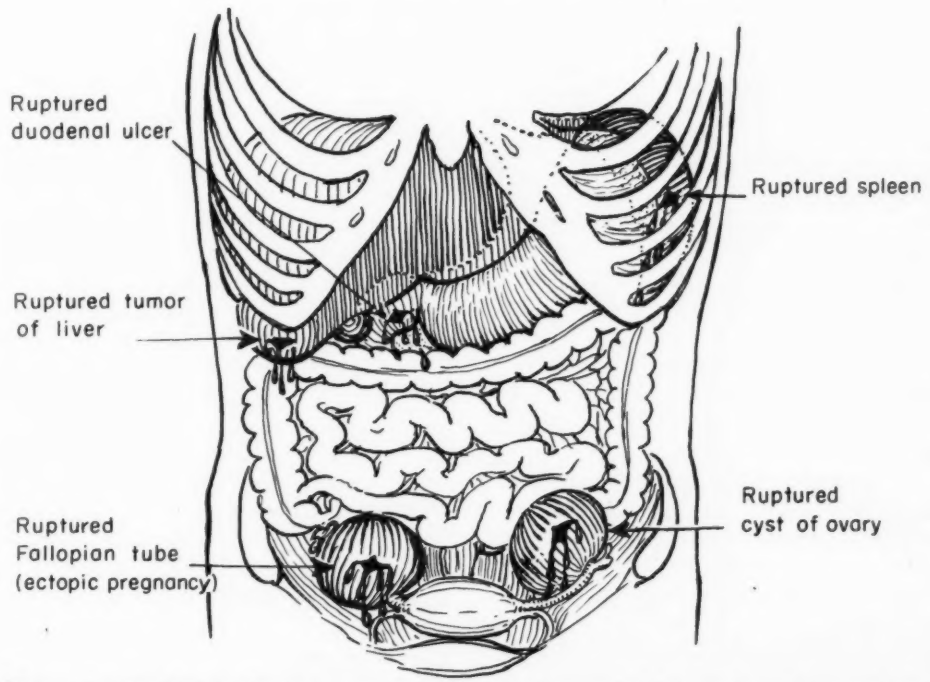

Figure 2. Drawing to illustrate some of the sites of concealed intraperitoneal hemorrhage.

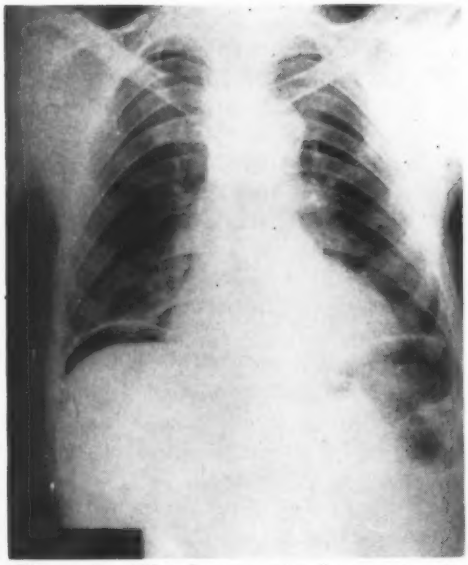

Figure 3. Film demonstrates large amount of free air beneath the right diaphragm in an upright chest film. This patient had a perforated duodenal ulcer.

free air, however, by no means rules out such a possibility since about 20 per cent of patients with a perforated peptic ulcer may not show the presence of free air under the diaphragm in the upright chest film. A large amount of air beneath the right diaphragm presents a striking picture; however, even a very small amount of air carefully looked for may be seen and may settle the issue in a given case. One must not confuse free air with the stomach air bubble beneath the left diaphragm.

Acute intestinal obstruction is one of the most treacherous as well as one of the most serious causes of acute abdominal symptoms. A typical stepladder pattern of distended small bowel characteristic of mechanical obstruction is usually diagnostic. All of us at times, however, have seen a critically ill patient in whom the roentgenologist was unable to make a diagnosis of obstruction and yet a complete obstruction was found to be present, perhaps with some compromise of the blood supply of the bowel. Ileus may be extremely difficult to differentiate in certain cases from mechanical obstruction. Occasionally an elderly patient will complain of low grade abdominal pain, gradually increasing constipation, and the inability to pass gas. A plain film of the abdomen may strongly suggest obstruction of the sigmoid due to carcinoma if the large and small bowel are distended. In such cases the patient at times will be found actually to have an ileus secondary to a ruptured appendix. If this possibility is kept in mind, the possibility of a mistaken diagnosis will be less likely.

Some of the most difficult decisions we are called upon to make occur in patients who receive a back injury and the question is raised as to whether or not an intra-abdominal injury requiring surgical intervention has also occurred. Abdominal pain, tenderness, and at times even board-like rigidity are seen in patients who suffer a severe back injury. The x-ray film may reveal distended loops of small bowel. Such patients are usually unable to be placed in position for an upright chest film; however, a lateral decubitus film may help determine the presence or absence of free air in the abdominal cavity as well as show evidence of the injury to the bony spine.

Retroperitoneal air outlining the kidneys and adrenal glands seen in a patient who suffered blunt trauma to the abdomen without perforation has enabled us to make a diagnosis of rupture of the retroperitoneal portion of the duodenum.

It is well to emphasize repeatedly that while the x-ray is helpful it may also be misleading and certainly its findings must be interpreted in the light of the patient.

Intestinal obstruction occurs perhaps most frequently as a result of adhesive bands existing within the abdominal cavity. More rarely it may result from volvulus, intussusception, and very occasionally from a gallstone which has found its way into the intestinal tract and is too large to pass.

Acute diverticulitis has often been described as a condition which produces symptoms and signs like appendicitis except that the findings are in the left lower

quadrant instead of the right. Diverticulitis more often occurs in people who have reached the fourth decade of life whereas appendicitis more often first causes trouble at a younger age.

Figure 4. Typical small bowel pattern as seen in patient with mechanical obstruction of small intestine secondary to adhesive band.

Figure 5. Plain film of abdomen demonstrating "bent inner tube" sign in patient with volvulus of sigmoid colon.

INTRAPERITONEAL HEMORRHAGE

Bleeding into the free peritoneal cavity or into the retroperitoneal space often produces severe pain as well as the symptoms of hemorrhagic shock. Abdominal pain following an injury to the left upper quadrant associated with pallor, a fast pulse, and falling blood pressure immediately makes one think of traumatic rupture of the spleen. It is exceedingly important to remember that in one case out of seven the hemorrhage following traumatic splenic rupture occurs hours to weeks after the injury rather than immediately. The splenic capsule may be torn followed by a slowly developing hematoma which at first may tend to be walled off by the omentum, stomach, and transverse colon. Later the bleeding becomes more profuse and occurs freely into the general peritoneal cavity. Splenectomy is indicated to prevent death from hemorrhage.

Intraperitoneal hemorrhage also may result from traumatic rupture of the liver, ectopic pregnancy, or from a ruptured corpus luteum cyst. The diagnosis of hemorrhage from a ruptured aortic aneurysm until recent years was only of academic interest. Now a number of these patients may be saved provided the patient is operated upon immediately and the aneurysm is excised and replaced by a graft.

ACUTE ABDOMINAL SYMPTOMS NOT RELATED TO SURGICAL CONDITIONS

It is exceedingly important to remember that a number of medical conditions at times may simulate the acute surgical abdomen. Mention of how coronary thrombosis may simulate the pain of ruptured ulcer or acute cholecystitis has already been made.

Acute abdominal symptoms occur often as a result of arachnoidism. The poison of the black widow spider, weight for weight, is fifteen times more potent than that of the rattlesnake. The muscle groups nearest the bite site go into a state of severe spasm which produces very severe pain. Since the spider bite itself is rela-

tively painless, it may be overlooked entirely as the cause of the symptoms. If the condition is kept in mind, however, unnecessary laparotomy is not likely to be carried out.

Sickle cell anemia is associated with acute abdominal symptoms at times which are most disturbing. In this disease there occurs thrombosis of small blood vessels followed by necrosis in the area involved. When this affects the intestinal tract it is easy to see how it may be confused with a surgical lesion especially since these patients also frequently exhibit fever, leukocytosis, and jaundice. A demonstration of the sickling trait plus an awareness of the condition usually enables one to come to the correct diagnosis. It must be borne in mind, however, that patients with sickle cell anemia may also have appendicitis, perforated ulcer, or acute cholecystitis.

Lupus erythematosus is not usually considered a cause of acute abdominal symptoms. Recently we saw a patient known to have disseminated lupus who was suffering from generalized abdominal pain, generalized abdominal tenderness, and some distention. The pain, after a period of observation, was believed to be due to the acute serositis the patient was developing. The problem was, of course, to decide whether the pain was an abdominal manifestation of the disseminated lupus or whether the patient had also developed some acute surgical condition.

ACUTE APPENDICITIS

Lastly, acute appendicitis remains not only one of the most frequent but also at times one of the most treacherous causes of acute abdominal symptoms. The typical attack in a young adult male is usually very easy to diagnose. In some others, however, particularly the very young and the elderly, the diagnosis may be very difficult. Certainly none of us can afford to be overconfident or careless regarding the diagnosis of the condition which occurs in so many individuals at some time during the life span.

SUMMARY

The acute abdomen is of great importance to all practicing physicians since one may be called upon at any time to minister to a patient with such symptoms, the cause of which is not readily apparent. The early decisions made in such cases may greatly affect the patient's chance for recovery. No empirical rules exist for the categorical diagnosis of such conditions. Surgical judgment based upon careful attention to the history, physical examination, and appropriate laboratory studies will usually enable the physician to arrive at the proper conclusion. The physician who has a properly prepared mind by having previously reviewed the various possibilities in such cases is far more likely to guide his patient safely through the illness.

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THE DIAGNOSIS AND TREATMENT OF ANORECTAL DISEASES*

RICHARD L. BUCK, M. D.
NEW ORLEANS

The scope of this paper includes the greater part of the field of proctology. Therefore, the discussion will be limited to the practical points of the anatomy, history, diagnosis, and treatment of the more common conditions.

HEMORRHOIDS

Hemorrhoids constitute a large part of the pathology seen by any proctologist. External hemorrhoids, varicosities of the inferior hemorrhoidal vein, are situated distal to the pectinate line and are covered by modified skin. They frequently appear in combination with internal hemorrhoids. Symptoms are usually due to thrombosis. The vessel ruptures, forming a painful tumor beneath the skin. These manifest themselves by sudden swelling as contrasted with the gradual swelling of an abscess. They are usually the result of some sudden exertion. The bluish clot is frequently visible through the skin. If solitary, these may be removed in the office by injecting novocain deep into the

* Presented at meeting of the Surgical Association of Louisiana, at New Orleans, November 4, 1956.

clot, excising a generous area of skin, and removing the clot. Usually pressure will stop the ooze. If there are numerous clots, with edema, prolapse, and associated internal hemorrhoids, a hemorrhoidectomy may be done at once. Waiting until the edema and thrombosis have subsided is unnecessary.

Internal hemorrhoids are varicosities of the internal hemorrhoidal plexus, a radicle of the superior hemorrhoidal vein. They appear as right anterior, right posterior, and left lateral hemorrhoids, because the right superior hemorrhoidal vein divides into a right anterior and posterior branch, while the left remains undivided. However, there are often secondary hemorrhoids between the primary ones. The treatment of large or complicated internal hemorrhoids is surgical removal. The type of operation depends entirely upon the surgeon. A procedure in which large numbers of sutures are used frequently results in more complications. The injection treatment of internal hemorrhoids should be limited to those which are small, uncomplicated, and bleeding.

CONDYLOMATA

Condylomata accuminata, often called venereal warts, are overgrowths of epithelial tissue, cauliflower in shape, and usually on pedicles. They must be differentiated from condylomata lata, which are venereal in origin. They may be treated either by fulguration, or, in less severe cases, by application of 25 per cent of podophyllin in mineral oil. Condylomata lata, a secondary manifestation of syphilis, are broad flat white elevations of the skin and are highly contagious. They may be single, but are more often multiple. The treatment is that of the underlying syphilis.

FISSURE

Anal fissure is a break in the skin of the anal canal, occurring posteriorly in 90 per cent of the cases. Cryptitis with edema of the skin and the weakness of the anal sphincter posteriorly cause anal fissure, although anal stenosis is a factor. Painful bleeding is symptomatic. The treatment is wet heat to relax the external sphincter, and, if the pain is severe, injection of a long-lasting oil soluble anesthetic. Anal ulcer is a chronic fissure, which is invariably infected. The treatment of this condition is surgical. The cauterization of anal fissures or ulcers by the use of silver nitrate or the actual cautery causes fibrous tissue formation. This prevents proper healing and results in recurrence.

STENOSIS

Anal stenosis or pectinosis, a narrowing of the anal canal, is frequently wrongly diagnosed as rectal stricture. This condition either follows a surgical procedure in which follow-up treatment is omitted and medication to produce liquid bowel movements is given, or it is the result of an infection. The anal area just below the pectinate line is the narrowest portion and is surrounded by fibrous tissue containing the lymphatics draining the pectinate line and crypts. Any condition such as cryptitis, papillitis, or anal ulcer will develop inflammation, proliferation of the connective tissue, and resultant anal stenosis. The treatment is either surgery or dilatation. The latter is rarely satisfactory; therefore, an operative procedure severing the stenotic area is usually necessary.

ABSCESSES

Anorectal abscesses may be divided into infralevator and supralevator. The infralevator abscesses include perianal and ischioanal, and usually arise from infected crypts of Morgagni, anal glands, fissures, or foreign body injuries. The symptoms are pain, swelling, and redness. The diagnosis is made by palpation. The treatment is early incision and drainage. The patient should be informed of a probable resulting fistula. The incision should be made outside of the anal sphincter, parallel to its fibers, and as close to the pectinate line as possible. Only in rare instances is it feasible to open the abscess and unroof the tract to its internal opening. The supralevator abscesses are submucous, pelvirectal, and retrorectal. The submucous abscesses may be opened into the bowel lumen. Pelvirectal and retrorectal abscesses are caused by extension

of submucous or ischioanal abscesses, injuries to the bowel wall, or ulcerative processes. The symptoms are more vague and associated with systemic reaction. The diagnosis can usually be made by digital examination. The treatment is incision and drainage. Incise outside the rectal wall and through the levator muscle. Pack the abscess cavity.

FISTULA

Anorectal fistula is a tunnel or abnormal communication between the anorectum and some other cavity or the outside skin. For this discussion anorectal fistula will be limited to the skin surface. Fistulae are always preceded by abscess formation. Before surgery, the internal opening of the fistulous tract should always be determined, and if that is not possible, the fistula allowed to abscess again before surgery. Adequate surgical treatment consists of unroofing the entire tract. In extensive fistulae, especially those deep to the entire sphincter, a seton should be employed, and in no case should the tract be packed. Careful postsurgical follow-up, accompanied by probing to rule out bridging, is essential.

PRURITIS ANI

Pruritus ani is one of the most persistent and troublesome conditions with which the proctologist has to deal. The etiology is not known, but there is an alteration in the anal and perianal skins caused by irritation or inflammation of the nerve endings. The itching is intense; scratching and rubbing cause additional skin damage. In the weeping stage, applications of one to ten Burow's solution as a soak are helpful. In the chronic stage, applications of tincture of iodine, tincture of merthiolate, and Castellani's paint are sometimes beneficial. The daily local application of small amounts of hydrocortisone ointments give a higher percentage of good results than any other local treatment. The resistant cases can usually be alleviated by clearing up all anorectal pathology and then either alcohol injection or the undercutting operation. However, even the results from these are not always permanent, and alcohol injection is fraught with the danger of slough.

CRYPTITIS

Cryptitis, an infection of the crypts of Morgagni, is often the forerunner of proctitis and abscess formation. It is also an etiological factor in anal fissure and pruritus ani. The diagnosis is easily made by examination of the anal canal with a speculum and the use of a hooked probe. Treatment with local applications of mild anesthetic solutions or ointments, such as Furacin, is of value. However, deep infected crypts are best treated by incision and drainage to the outside. Papillitis, or inflammation of the anal papillae, is, as a rule, associated with cryptitis. Anal papillae, found at the pectinate line, are covered by modified skin, and in the presence of infection hypertrophy and become painful. They should be removed by fulguration or excision.

BENIGN TUMORS

Under benign tumors of the rectum, only two conditions, villous papilloma and adenomatous polyps, will be mentioned. Villous papilloma or adenoma are usually large soft tumors with numerous frond-like projections. They excrete large amounts of mucus, bleed easily, and may cause considerable straining at stool. The feel and appearance are diagnostic. They frequently undergo malignant degeneration and should be removed. The smaller ones can be fulgurated; the large ones can occasionally be removed if there is a long pedicle, but abdominoperineal resection is often necessary. Adenomatous polyps are premalignant lesions and should be removed in all cases. The small sessile polyps can be fulgurated easily and need not be biopsied. The pedunculated polyps should be biopsied; the base can often be fulgurated and the whole polyp sent to the laboratory. However, where the sessile polyp is large, it may have to be fulgurated in stages and several biopsies taken to rule out malignant cells.

CARCINOMA

Carcinoma of the rectum should be suspected when there is daily passage of

small amounts of blood and mucus. Rarely is any severe hemorrhage encountered. The treatment of carcinoma of the anal canal and rectum is surgical. The operation of choice is an extensive abdominoperineal resection.

ULCERATIVE COLITIS

Chronic ulcerative colitis is only mentioned here as a warning against any extensive anorectal surgery. Even in quiescent periods, surgery of the anorectal area should be limited to emergency surgery, such as the incision and drainage of abscesses.

WOUNDS

Anorectal wounds are different from any other wounds of the body in that they cannot be sutured. They have to be allowed to granulate in most cases. Therefore, the follow-up care is essential to insure good results.

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GASTROINTESTINAL COMPLICATIONS ENCOUNTERED DURING ADRENOSTEROID THERAPY *

GORDON McHARDY, M. D.
ROBERT McHARDY, M. D.
CLAUDE C. CRAIGHEAD, M. D.
NEW ORLEANS

The early literature on adrenosteroids depicted therapeutic conquest; even early recognition of their limitation and untoward side effects did not deter the aggressive therapist. More general usage was accompanied by abuse. Many of the disasters have occurred during proper medical management of a disease. Unfortunately, iatrogenic entities have been precipitated by injudicious use of adrenosteroids because of failure to exact a specific diagnosis or reluctance to recognize and cope with the problems of a severe illness. Whether or not the entities encountered and so routinely listed as complications to adrenosteroid therapy are genuine or merely concomitants of the disease is not always satisfactorily established.

The more common untoward effects of adrenosteroids often occur in multiplicity. In an analysis of 260 ambulatory patients under prolonged steroid therapy (beyond six months) undesirable reactions apparently precipitated by these agents included five concomitant or possible complicating gastrointestinal disturbances (Table 1).

TABLE 1
UNTOWARD EFFECTS ASSOCIATED WITH ADRENOSTEROID THERAPY
(260 AMBULATORY PATIENTS)

Untoward Effect	No. Cases
Facial rounding	67
Dependent edema	
Transient	48
Persistent	23
Hypertension	29
Glycosuria without hyperglycemia	24
Hyperglycemia	19
Hirsutism	
Mild	18
Severe	4
Acne	7
Allergy to ACTH	6
Psychoses	4
Demineralization fractures	3
Electrolyte disturbances	3
Duodenal ulcer hemorrhage	2
Duodenal ulcer	1
Gastric ulcer perforation	1
Diverticulitis with perforation	1

These included acute duodenal ulcer in a chronic dyspeptic patient, which healed promptly on discontinuance of meticorten, hemorrhage in 2 patients known to have a duodenal ulcer and in whom intractability, previous hemorrhage and perforation had occurred, perforation of an acute gastric ulcer in a patient not previously investigated gastrointestinally, and silent perforation of diverticulitis of the sigmoid in a severely ill cirrhotic patient be-

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From the Departments of Medicine and Surgery, Browne-McHardy Clinic, Louisiana State University School of Medicine, and Touro Infirmary, New Orleans, Louisiana.

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ing treated with ACTH for precomatose manifestations. In addition, there were 19 patients in this series in whom vague dyspeptic complaints, primarily pyrosis, developed but in whom no gastrointestinal dysfunction or disease was demonstrable (Table 2).

TABLE 2
GASTROINTESTINAL DISTURBANCES ENCOUNTERED DURING ADRENOSTEROID THERAPY

Peptic ulcer "creation"
Gastric, duodenal, and anastomotic
Peptic ulcer reactivation
Gastric and duodenal
Peptic ulcer complication
Hemorrhage
Perforation (but no instance of obstruction)
Perforation of diseased bowel
Chronic ulcerative colitis
Regional enteritis
Meckel's diverticulum
Diverticulitis
Perforation of diseased gallbladder
Masked
Exacerbation or development of ulcerative esophagitis
Phlegmonous gastritis
"Masking" of peritonitis

Peptic ulcer.—The development, recurrence, or complication of a peptic ulcer has been rendered conspicuously prominent as a concomitant of adrenosteroid therapy by the bold hypothesis of Gray. Gray and associates [1] have attempted to correlate hormonal induced gastric hypersecretion of acid and pepsin with the occurrence of ulcer, suggesting a causal relation between adrenosteroid therapy and development of peptic ulcer. This provisionally adopted concept has been accepted as dictum by some [2, 3] and as conjecture by others.[4, 5] It has provoked revision of etiologic thought, controversy, and deliberation. (Fig. 1).

Confusing the issue and frustrating to the proponents of the hormonal etiologic factor are the reports of the quiescence and healing of peptic ulcer during administration of hormones.[4, 5] The true incidence of peptic ulcer in our general population may preclude the assumption of causal phenomenon and indicate merely concomitancy. Peptic ulcers have been

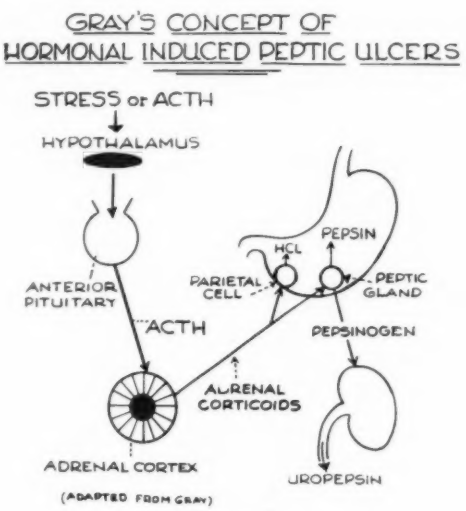

Figure 1

noted after the use of drugs commonly administered with adrenosteroids, i.e., cinchophen (phenylcinchoninic acid), colchicine, some salicylates, butazolidin (phenylbutazone). Occurrence or complication of ulcer has not been correlated with dosage or duration of therapy. Furthermore, some patients with ulcer are prone to complication; Casey [6] encountered previous complication in 86 per cent of patients prior to the terminal disaster. In evaluating stress as an ulcer activator, Casey [6] was able to demonstrate such correlation in 16 out of 102 cases, and in only 2 (1.9 per cent) was this stress related to administration of adrenosteroid therapy. Wollaeger [7] evasively concludes that "under certain circumstances and in certain individuals the hormones appear to play a determining role in producing ulcers."

Seemingly confirmatory of Gray's hypothesis has been the reported incidence of ulcer during administration of corticotropin, ACTH, and cortisone,[1-5, 8-76] although it did not always necessitate cessation of therapy.[3, 5, 16, 17, 24, 29, 41, 65, 66] Summarization of these publications, however, indicates that occurrence or recurrence of ulcer or precipitation of ulcer complication is more the exception than the rule. Among over 1738 patients on prolonged administration of cortisone or ACTH, or

both, there were 101 (5.8 per cent) peptic ulcers encountered, of which 76 (4.4 per cent) were presumed to be new. The spontaneously recurrent nature of peptic ulcer would seem to be consistent with this low reactivation incidence of 1.4 per cent during treatment of any illness.

These figures are further depreciated by the incidence of ulcer of 9.8 per cent, which represents an average figure of the estimates reported in various publications.[77-88] When, in addition, one considers that hormones are primarily used in arthritic patients, it is of interest to know the influence of this disease on the digestive tract. Bauer [89] has encountered an incidence of ulcer of 6.5 per cent in male arthritic patients, and Ragan [90] has estimated the frequency of ulcer to be 6 to 8 per cent among rheumatoid patients. Gastrointestinal functional abnormalities are also frequently encountered in roentgenographic study of arthritic patients.[91-95]

All ulcers, moreover, are prone to complication. The incidence of perforation has been reported by Edwards and Jennings [96] to be as high as 14 per cent; an average figure compiled from several publications is 7.6 per cent.[83, 97-105] Nevertheless, reports of perforation in patients with ulcer who had been treated with adrenosteroids are startlingly numerous.[2-5, 8, 9, 15-76] Hemorrhage is also a common occurrence, with an incidence of 16.8 per cent reported by Edwards and Jennings.[96]

The "story of the adaptation syndrome" describes stress of specific form but arising from no specific cause [106, 107] (Fig. 2). Increased ACTH secretion, adrenal cortical stimulation to increased corticoid production, eosinopenia, anti-inflammatory effect, lymphatic atrophy, and tendency to peptic erosion of stomach and duodenum may result from such stressors as trauma, tension, infection, thermal exposure and exposure to roentgen-ray and is also hypothesized to be reproducible by ACTH and cortisone administration. The theorization has dramatic appeal and can readily be visualized as an explanation for such acute erosions as Curling's ulcer and the "air-

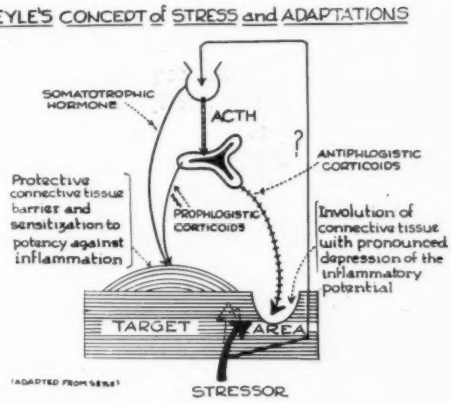

Figure 2

raid ulcer." Its relation to the true gastric ulcer, however, is not so readily acceptable in view of the characteristic lack of hyperchlorhydria and hyperpepsinia in this entity. The only confirmatory evidence is the empiricism that peptic ulcers develop and exacerbate under stress,[108] but they do so seasonably and possibly under such vague influence as thermal and astronomic changes.[109]

The adaptation syndrome, although interesting, is complex and not as easily analyzed as some believe. The human being is an equally complex reactor, and whether or not his anterior pituitary gland predominantly secretes stimulation to more anti- and prophlogistic corticoids or sufficient somatotropic hormone is not measurable by any presently available investigative mode. There can obviously be great individual variation in the relation of ACTH and cortisone therapy to ulcer potentiation. This variation can probably be explained on the basis of the omissions in Gray's chart, which result in emphasis of the positive influence and disregard of the neutralizing factors. Gray's chart is etiologically enlightening as to why one encounters new "acute" ulcers, reactivated pre-existing ulcers, and the complications of both. Experimentally, granulation tissue is a protective barrier to peptic digestion; however, strong stressors or administration of antiphlogistic hormone removes this resistance.[106] It appears that Gray's postulates should not be

stated with such definitiveness; the degree of reservation in one of his later statements should be requoted: "We do not see ulcers in a majority of the patients who have been on large doses of ACTH and cortisone for long periods." [69] Actually, a more accurate estimate of the incidence would seem to be approximately 5 per cent.[70]

Furthermore, it is our impression that not all gastrically normal patients or ulcer patients respond to stress induced by emotional, physical, or hormonal factors in the fixed pattern indicated in Gray's work. Our attempt to duplicate his observations with the use of routine dosage of meticorten and meticortelone in proved adrenal stimulation was unsuccessful.[110] We found anticipated human variables in 202 case studies; some patients adhered to Gray's concepts, some were indifferent to stress, and some sought a middle pathway. This concurs with our analysis of individual reaction to stress and reflects the personality of man as he responds to his environs.

To test the point further, we gave these drugs to 13 patients in whom there was established duodenal ulcer activity or who had just recovered from complications. Here again, variables were encountered. Some ulcer patients with expected high initial uropepsin excretion responded to adrenal stimulation with a sustained, more elevated excretion of uropepsin; in others the stimulation to increased secretion was transient. Not all active duodenal ulcers, even in the presence of complication, were associated with a high excretion of uropepsin. Ulcer healing, both gastric and duodenal, was achieved during administration of meticorten and meticortelone in patients with a sustained high excretion of uropepsin as well as in those in whom the stimulation to uropepsin excretion was not remarkable. In our patients there was no evidence whatever of sustained stimulation to hydrochloric acid.

With our present knowledge and temerity, we cannot advocate a more radical or conservative stand than that of Thorn:[63] "In the presence of an active ulcer the administration of cortisone is contraindicated. If a deformity indicative of a healed lesion is discovered, hormone therapy may only be undertaken if the indications for its use are carefully evaluated and accepted measures for ulcer management are instituted." However, if the indication for the use of the hormone exceeds the risk and the need is short-termed, we dismiss Thorn's first statement as irrelevant in view of case individualization.

Perforation of diseased intestine in association with hormone therapy has been repeatedly reported in patients with both chronic ulcerative colitis and regional enteritis.[28, 60, 111-114] Delayed postoperative jejuno-ileal perforation has been projected as a hormonal effect in patients who have had ileostomy for ulcerative colitis.[28, 111] The mechanism may be explained on the basis of suppression of inflammatory reaction (antifibroplastic action) by predominant antiphlogistic corticoid stimulation over prophlogistic and somatotropic hormone elaboration.[107]

In our review of 86 cases of chronic ulcerative colitis and 18 cases of regional enteritis, despite the necessity for extensive surgical intervention in 32 patients, perforation was recorded only in the patients with regional enteritis on the anticipated basis of enteroenteral and enterocutaneous fistulae. It was also observed in 2 patients with severe, fulminating chronic ulcerative colitis, massive hemorrhage, and multiple perforations who died within seventy-eight hours after hospital admission without the beneficial or deleterious effect of hormonal therapy.

The possible creation of *giant colonic ulcers* in ulcerative colitis by steroids is suggested by Ruffin and associates.[62, 115] These are specifically different lesions in appearance and structure from the ulcerations characteristic of the disease. Ulcers of such description were also encountered by Sauer and associates [60] in patients not considered to have ulcerative colitis who were given adrenosteroids for rheumatoid

arthritis. We have encountered 2 such patients who never received hormone therapy but did have antibiotic drugs. Perhaps the basis for such occurrence as Ruffin and Sauer described might be considered to be the result of dominant antiphlogistic corticoid stimulation. If we are correct in correlating our occurrences with antibiotic therapy, perhaps it is a question of creation of altered bacterial flora or lowered host resistance.

Only one report of *rupture of a diseased gallbladder* [116] has been published. Acute cholecystitis may conceivably occur during, or be masked by, cortisone therapy or it may be misdiagnosed and erroneously treated so as to permit development of gangrene with perforation. The indictment should be against the diagnosis and injudicious use of cortisone; the diagnostician, and not his therapeutic agent, should be convicted.

Rupture of Meckel's diverticulum has occurred in association with adrenosteroid therapy, but the attempt to correlate these is not understood.

Exacerbation or development of ulcerative esophagitis, reported by Sauer and associates,[60] is accepted too casually as a complication of cortisone administration. Their patient was a debilitated rheumatoid victim with regional enteritis who had Miller Abbott intubation and antibiotic therapy for enteric perforation, peritonitis, and bronchopneumonia, any of which may have caused the esophagitis.

We have administered meticorten over prolonged periods to 12 patients with erosive esophagitis in a study of therapeutic response and uropepsin excretion. Nine patients enjoyed improvement and symptomatic response during the period of treatment with meticorten, whereas the other 3 showed evidence of accentuation of manifestations without complication. There was no case of established hydrochloric acid or pepsin secretory stimulation.

Phlegmonous gastritis as a complication of cortisone therapy is a rare entity that may conceivably arise from a disturbance in host resistance.[117] The occurrence of such bizarre illness predated steroid therapy and has thus far defied etiologic explanation.

Masking of peritonitis by absence of fever, abdominal rigidity, and severe pain is truly hazardous when these hormones are injudiciously employed prior to establishment of an accurate diagnosis.[28, 114, 118, 119] Such occurrences may certainly be overlooked during routine hormone therapy if the clinician does not follow his patient well, carefully evaluate new syndromes, and remain aware of the concealing power of these agents.

DISCUSSION

The competent, gastroenterologically minded internist should apply adrenosteroid therapy with relative impunity. Just as awareness of the electrolyte imbalance of intractable vomiting or diarrhea, or its counterpart, intubation with suction and enterostomies, is important, so are the patient's normal needs and those imposed by hormone therapy. When these agents are employed to combat a disease coexistent with a gastrointestinal entity susceptible to their untoward influence or when they are used as specific therapy for the gastrointestinal entity in which untoward effects may accompany beneficial influence, he must employ more caution. We use arsenic, digitalis, insulin, emetine, antibiotic agents, sulfonamides, anticoagulants, transfusions, intravenous liver extract, antipyrexic agents, norepinephrine and quinidine, when the indications are adequate, realizing an appreciable risk. We should, similarly, continue to use adrenosteroids when they are indicated, for their side effects are no more frequent, are less likely to be specifically induced, and are probably preventable if proper precautions are exacted.

The admonition is to know the therapeutic agent, its advantages, and disadvantages. If the limitations of adrenosteroids are recognized and if the hormones are used intelligently, iatrogenic entities will rarely be created. When they are used in the actual or suspected pres-

ence of peptic ulcer, the regimen for this lesion should be used concomitantly, and when they are used in infectious diseases, a specifically indicated antibacterial agent is essential to the program.

CONCLUSIONS

The adrenosteroids may contribute to the recurrence or complication of a pre-existing gastrointestinal disease, but the causal relation has not been unequivocably established. Meticorten and meticortelone may be used with caution in the presence of peptic ulcer.

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ANOMALIES OF INTESTINAL ROTATION *

CLARENCE E. GARDNER, JR., M. D.
DURHAM, N. C.

Abnormalities of intestinal rotation are of great interest to surgeons, as well as to pediatricians, gastroenterologists and roentgenologists. They may be the cause of a variety of symptoms, the commonest of which is intestinal obstruction in infants or children. Or they may exist without symptom and be incidental findings at operation for other conditions, at which time the bizarre positioning of the viscera may be so confusing that the originally planned operation may have to be abandoned.

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EMBRYOLOGY

The intestinal tract of the early embryo is a straight structure suspended in the sagittal plane on a common dorsal mesentery (Fig. 1). The process by which this primitive position is converted to that seen at birth is called intestinal rotation.

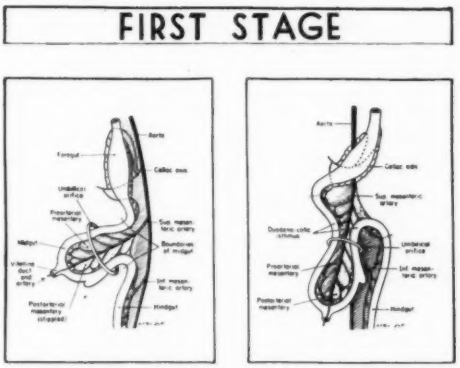
Embryologists [1] divide the primitive intestinal tract into three parts. The foregut extends from esophagus to duodeno-jejunal junction and receives its blood supply from the coeliac axis. The midgut extends from duodeno-jejunal junction to midtransverse colon and is supplied by the superior mesenteric artery. The hindgut extends from midtransverse colon to anus. It is the part which receives its blood supply from the inferior mesenteric artery.

The midgut portion is the one primarily concerned in intestinal rotation and is the only one under discussion. When it rotates the whole loop rotates about the superior mesenteric artery as an axis.

This process of rotation about the superior mesenteric artery is a contraclockwise one which embryologists divide into three stages. The first stage is a 90° rotation of midgut loop from sagittal to horizontal plane (Fig. 1 after Dott [2]). The second stage is an additional 180° rotation (Fig 2). In the third stage the cecum descends from its subhepatic position into the right lower quadrant and the mesentery of the ascending colon becomes fixed to the posterior abdominal wall (Fig. 3).

FIRST STAGE OF MID-GUT ROTATION

Embryology:—The primitive intestinal tract is a straight structure suspended on a dorsal mesentery in the sagittal plane. As it elongates, the midgut loop bulges through the umbilical orifice into the primitive umbilical cord as a temporary physiologic umbilical herniation. The first stage of intestinal rotation is a counterclockwise rotation of 90° of this intra-umbilical loop from the sagittal to the horizontal plane (Fig. 1). It occurs at



Eighth week of intra-uterine life. The mid gut loop is within a temporary umbilical herniation. A 90° contraclockwise rotation from the saggital (left view above) to the horizontal plane (right view above) occurs.

ANOMALY

Omphalocele. Arrest of rotation with a persistent umbilical hernia covered by jelly-like cord structure

Figure 1

about the eighth week of intrauterine life.

Omphalocele:—Failure of rotation beyond the first stage and retention of the midgut loop in the umbilical stalk at the time of birth is called omphalocele, amniotic hernia, or exomphalos. In this condition herniation of intestine and sometimes also of liver and spleen into the umbilical cord is present at birth, the hernial covering being the thin translucent umbilical cord structure.

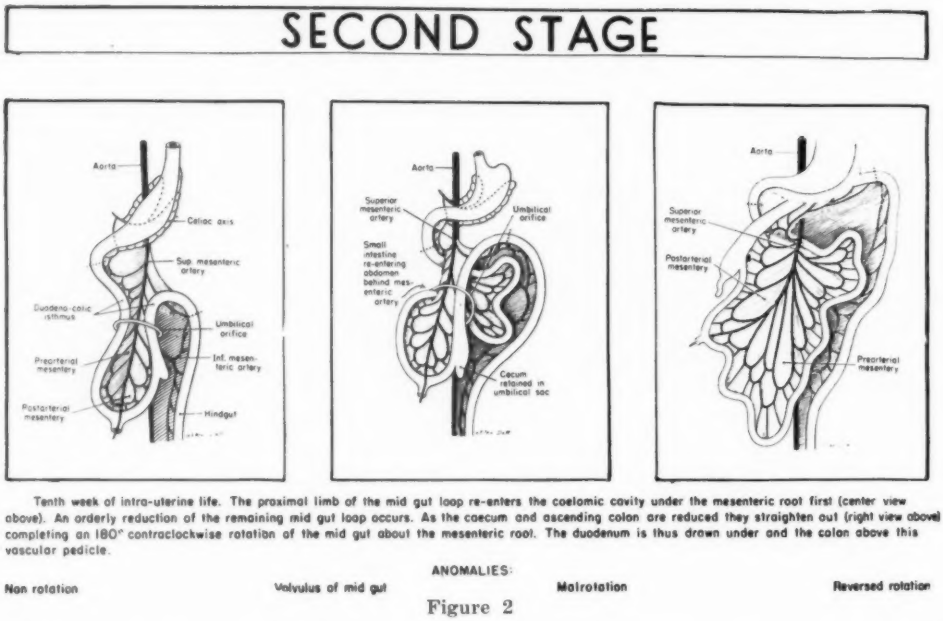
The jelly-like cord structure covering such a herniation is delicate and liable to rupture within the first few hours of life. To prevent evisceration it is necessary for the surgeon to correct the defect promptly. If the herniation is small, it may be a simple matter to replace the bowel and repair the abdominal wall. In the case of larger herniations which may include the liver and spleen, Gross [3] has described a procedure wherein the covering of amniotic membrane over the viscera is not removed but is covered with skin mobilized from thorax, flanks and abdomen. No effort is made to close other structures of the abdominal wall until a later stage. This technic eliminates evisceration of bowel at operation and since the viscera are merely covered with skin and not replaced into the peritoneal cavity, there is a minimum rise in intra-abdominal pressure with crowding of viscera against the diaphragm.

SECOND STAGE OF MID GUT ROTATION

Embryology:—This is the stage when reduction and major rotation of the bowel occurs and is the most important stage of intestinal rotation. The midgut loop returns to the peritoneal cavity from its temporary position in the umbilical herniation and at the same time rotates an additional 180° in a counterclockwise direction about the mesenteric root as a pedicle (Fig. 2). This stage occurs quickly, at about the tenth week of intrauterine life, and in none of the models studied by Mall or by Frazier and Robbins was the gut found in its process of return. Snyder and Chaffin [4] have recently studied a 37 mm. embryo in which about half of the intestinal tract remained within the cord. In the process of rotation the proximal limb of the prearterial segment is thought to be reduced first, its coils entering the abdomen in an orderly sequence, passing under the superior mesenteric vessels and the mesentery (Fig. 2 center). As these coils collect in the left side of the abdomen they deflect the hindgut and its mesentery to the left so that the splenic flexure and descending colon are carried into their normal position. The cecum and adjacent colon are reduced last, and as the colon straightens out it is deflected to the right, thus completing a 180° rotation in a counterclockwise direction about the superior mesenteric artery as an axis (Fig. 2 right). The duodenum thus comes to lie under the origin of the superior mesenteric artery while the colon passes in front. The final result is a 270° rotation from the sagittal position of the midgut loop at the start of the first stage. In this way the intestinal tract comes to occupy its position as normally seen at birth.

A wide variety of abnormalities may occur as a result of anomalies during the second stage, the commonest being nonrotation, volvulus of the midgut, internal hernia and reversed rotation.

Nonrotation:—In nonrotation the midgut loop is returned to the peritoneal cavity from the temporary umbilical hernia-



Tenth week of intra-uterine life. The proximal limb of the mid gut loop re-enters the coelomic cavity under the mesenteric root first (center view above). An orderly reduction of the remaining mid gut loop occurs. As the caecum and ascending colon are reduced they straighten out (right view above) completing an 180° contraclockwise rotation of the mid gut about the mesenteric root. The duodenum is thus drawn under and the colon above this vascular pedicle.

Figure 2

tion without having rotated beyond the horizontal plane it occupied at the end of the first stage (Fig. 1 right). The duodenum descends on the right of the superior mesenteric artery. The small intestine is entirely in the right side of the abdomen and the colon is on the left. The cecum is in the left lower quadrant. The terminal ileum crosses the midline to enter the cecum from the right. From this point the ascending colon passes upward on the left of the midline to a point behind the greater curvature of the stomach. Between this point and the splenic flexure is a narrow U-shaped loop of transverse colon. The descending colon and rectum are in normal position.

Nonrotation is recognized at x-ray by noting that the duodenum descends entirely on the right side of the vertebral column and that small bowel loops are entirely on the right. The colon is entirely on the left. This anomaly may exist without symptoms.

Volvulus of the Midgut:—If nonrotation occurs without secondary fixation of the mesentery, the entire midgut loop hangs free from a narrow pedicle at the origin of the superior mesenteric artery (duodeno-colic isthmus, Fig. 1 right). This narrow point of suspension for the long midgut loop predisposes to the development of a volvulus of the entire midgut. Such condition is a frequent cause of acute duodenal obstruction in newborn infants. It is also a cause of chronic or recurrent duodenal obstruction in children and young adults. Anomalous adhesive bands crossing the duodenum in patients with nonrotation also occasionally cause chronic duodenal obstruction.

The usual picture of volvulus of the midgut [5, 6] is that of partial or complete duodenal obstruction dating from birth. First feedings are usually taken normally and meconium and in some cases normal stools are passed. Vomiting, constipation, and abdominal pain usually begin on the third or fourth day. The vomitus contains bile. This finding rules out congenital pyloric stenosis as a cause of the vomiting. Vomitus is often projectile. Epigastric distention and visible waves of gastric peristalsis are often present. A plain roentgenogram of the abdomen will show a dilated stomach and duodenum with a small amount of air in the intestine, or not, depending upon whether the ob-

struction is partial or complete. It is unwise to put barium into the stomach. If the roentgenologist is able to demonstrate that the entire duodenum is on the right side of the vertebral column or that the colon is entirely on the left, an anomaly of rotation can be suspected. Usually it is impossible to determine before operation whether the duodenal obstruction is caused by atresia, stenosis, extrinsic bands, or a volvulus of the midgut.

Operative treatment offers the only hope of cure for patients with volvulus of the midgut. In those with symptoms of intestinal obstruction or vascular occlusion, immediate operation is imperative. At operation the volvulus of the entire mesentery may be easily overlooked if adequate exploration is not done. The condition may be suspected if the right half of the colon is not found in its normal position or if on palpation a firm cord representing the twisted root of the mesentery can be felt at the site of origin of the superior mesenteric artery. Complete evisceration of all of the intestine is advised as the quickest method of determining the true nature of the condition present. Detorsion of the volvulus is easily accomplished. All of our patients had adhesions attaching bowel and mesentery of the entering and emerging loops of intestine which had been involved in the volvulus. These adhesions must be divided as in freeing two adherent leaves of a book. Adhesive bands may also extend from the colon across the duodenum to the posterior abdominal wall. They must be divided, as well as the adhesions uniting entering and emerging loops of bowel, in order that the duodenum be completely freed and separated widely from the colon. If these adhesions are not freed recurrence of the volvulus may occur.

Chronic venous obstruction which has accompanied the volvulus may cause enormous distention of the mesenteric veins. Care must be taken not to damage these veins when adherent leaves of mesentery are separated. Lymph nodes in the mesentery are usually much enlarged by the lymphatic obstruction which accompanied the volvulus. In one of our cases, dilated lymphatics could be seen in the mesentery and there was a little chylous free fluid in the peritoneal cavity.

After being freed the bowel is returned to the abdomen in a state of nonrotation, with the doudenum descending on the right of the vertebral column and the colon ascending on the left. Entering and emerging loops of bowel involved in the volvulus which were previously adherent are separated as widely as possible when the bowel is replaced. No effort to fix the bowel has been attempted in any of our cases and none of our patients have had recurrence of their volvulus. Recurrences have been reported in cases where adhesions between loops of bowel in the volvulus or adhesive bands crossing the duodenum were not freed. Wangensteen [7] has reported a method of fixation of the bowel in a position of normal rotation. Some effort to fix the nonrotated cecum and ascending colon along the left lumbar gutter would seem to be a simpler method of preventing recurrence of the volvulus, if any fixation is necessary.

Internal Hernia:—Complicated explanations of the origin of paraduodenal, retroperitoneal or internal herniations occur in the literature which describe them as occurring in any one of as many as nine fossae about the duodenojejunal junction and four in the cecal area. Their explanation on the basis of an anomaly of intestinal rotation is much simpler and was first offered by Andrews [8] in 1923. He explained the origin of the paraduodenal hernia as imprisonment of small intestine under the mesentery of the right colon during the process of fixation of the midgut loop after its rotation.

Haymond and Dragstedt [9] in careful autopsy dissections of a case with large internal hernia previously observed at operation, showed that the abnormality was one of malrotation during the second stage of intestinal rotation. The essential feature of the abnormality was a rotation of the bowel into the mesentery of its

postarterial segment (later to become the mesentery of the ascending colon) instead of into the free peritoneal cavity, during the phase of intestinal rotation when the midgut loop was reduced back into the peritoneal cavity from the umbilical orifice. In their case and in ours almost the entire small intestine was in the sac. The amount of bowel involved may vary from a short loop to the entire small intestine.

Many of the patients with internal hernia have no symptoms, and the condition is recognized only incidentally at operation, anatomic dissection or autopsy. If symptoms occur they are usually those of partial or intermittent intestinal obstruction.

In our case precise diagnosis of the condition present was made by Reeves [10] who visualized the barium-filled small intestine enclosed in a circular pocket in the center of the abdomen. This pocket was surrounded by colon of the midgut loop. The splenic flexure and descending colon were normally placed.

At operation an adequate exposure, knowledge of embryonic origin, and delivery of as much bowel as is necessary will usually make the situation clear. Since the wall of the sac is the mesentery of the postarterial segment of the midgut loop (terminal ileum and right colon) care must be taken not to damage its blood vessels. The recommended procedure is to withdraw the bowel from the internal hernial sac and to close its mouth with as many sutures as are necessary.

Reversed Rotation:—In this condition a clockwise instead of a counterclockwise rotation of 180° occurs during the second stage. The transverse colon thus comes to lie under the superior mesenteric artery and the duodenum above it. If normal fixation of the root of the mesentery toward the right iliac fossa takes place with the bowel in this position, the transverse colon becomes trapped in a tunnel beneath this acquired attachment. Fixation of the cecum and ascending colon is usually incomplete and torsion of the mobile right half of the colon with obstruction of the transverse colon at the site of the tunnel through the root of the mesentery may occur.

True reversed rotation is not common. McIntosh and Donovan [11] collected 16 cases and added one of their own. We have never had such a case.

THIRD STAGE OF MID-GUT ROTATION

Embryology:—This stage is characterized by descent of the cecum from its subhepatic position to the right lower quadrant and fixation of the mesentery of cecum and descending colon in the right flank (Fig. 3). Fixation of the descending colon and of the lower portion

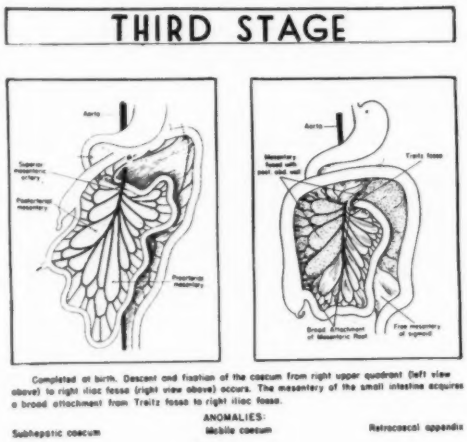

THIRD STAGE
Aorta
Superior mesenteric artery
Postarterial mesentery
Preartenal mesentery
Aorta
Mesentery fused with small intestine
Treitz fossa
Broad attachment of Mesenteric Root
Free mesentery of sigmoid
Completed at birth. Descent and fixation of the caecum from right upper quadrant (left view above) to right iliac fossa (right view above) occurs. The mesentery of the small intestine acquires a broad attachment from Treitz fossa to right iliac fossa.
ANOMALIES:
Subhepatic caecum
Mobile caecum
Retrocaecal appendix

Figure 3

of the duodenum also occurs in this stage which is completed about the time of birth.

The important feature of this stage is the fixation of the ascending colon and cecum with its mesentery in the right iliac fossa and with it the fixation of the root of the small bowel mesentery on a wide base from left upper to right lower quadrants. The midgut loop originally dependent from a narrow pedicle at the origin of superior mesenteric artery now acquires a broad oblique attachment to the posterior abdominal wall. It is the absence of this attachment which predisposes to volvulus of the entire mesentery.

Anomalies of the third stage include subhepatic cecum, retrocecal appendix and mobile cecum.

Subhepatic Cecum:—If the cecum fails

to elongate and descend into the right iliac fossa it remains in a subhepatic position. If with the cecum in this position there is also failure of fixation of the small bowel mesentery on a broad attachment of the posterior abdominal wall, volvulus of all of the small intestine may occur. The only other significance of this anomaly is that appendicitis, if it occurs in such a position, may be unrecognized if the possibility of a high lying cecum is not kept in mind.

Retrocecal Appendix:—If the appendix is drawn under the cecum as the cecum descends into the right lower quadrant it may become fixed in a retrocecal position during the normal process of fixation of the cecum and ascending colon to the peritoneum of the right flank. This is a rather common anomaly and is well recognized by surgeons, although they usually fail to consider it an anomaly of rotation.

Mobile Cecum:—Failure of fusion of the cecum and ascending colon and its mesentery to the peritoneum of the right iliac fossa in a normal manner allows undue mobility of the cecum and ascending colon. This was formerly in itself thought to be the cause of symptoms, and numerous operations were devised for its correction. At present a mobile cecum is thought to be of significance only because it may be the seat of volvulus of the cecum or because it may allow the appendix to occupy a position almost any place in the abdomen so that appendicitis in an anomalously located appendix may go unrecognized.

Volvulus of the Cecum: — Volvulus of the cecum occurs only in a mobile cecum. The twist is usually a longitudinal one about the long axis of the ascending colon, although there may also be a rotation in the oblique axis so that the cecum comes to lie in the epigastrium or left upper quadrant. The signs and symptoms are those of acute intestinal obstruction, often with enormous dilatation of the cecum. Roentgenograms show evidence of dilated small bowel plus a large cecal gas shadow. Barium introduced by enema will show an obstruction in the region of the hepatic flexure. At operation detorsion is done. Cecopexy or cecostomy may be necessary. If the bowel is gangrenous it must be resected.

SUMMARY

Intestinal rotation is the process which converts the position of the intestinal tract of the early embryo from a straight structure suspended on a common dorsal mesentery in the sagittal plane to the position seen in the normal child at birth.

A precise knowledge of the stages of this process of rotation and fixation and of the abnormalities which may occur in each is essential to the surgeon lest he be confused when confronted by one of the anomalies.

Each of the more common anomalies which occur in the three stages of rotation is described. They include omphalocele, nonrotation, volvulus of the midgut or of the entire small intestine, various types of malrotation, internal hernia, reversed rotation, subhepatic cecum, mobile cecum, volvulus of the cecum and the retrocecal appendix.

Some of the anomalies may exist without symptom and be detected only incidentally on roentgen ray examination, at operation, or when a diseased organ, particularly the appendix, is found in an anomalous position. If symptoms occur from the abnormality of rotation and fixation the usual ones are those of partial or complete intestinal obstruction.

Volvulus of the entire midgut or of the entire small intestine is the most common cause of intestinal obstruction secondary to anomalies of intestinal rotation. Volvulus of the cecum may occur if cecum and ascending colon fail to become fixed to the posterior abdominal wall during the third stage of rotation.

Innumerable other irregularities of intestinal rotation may also occur especially during the second stage. They include a wide variety of anomalous kinks, adhesive bands and irregular fixations which are not difficult to unravel if the normal process of rotation is understood.

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PRINCIPLES OF OFFICE UROLOGY *

T. LATIOLAIS, JR., M. D.
LAFAYETTE

The need for this paper is obvious in that urology comprises 10 per cent of the average general practitioner's office work, and 100 per cent of the patients he sees have to have a normally functioning urinary system as this is one of the vital organs of the body. A knowledge of anatomy, physiology and pathology is essential in diagnosis and treatment of urinary tract disease.

The genito-urinary tract may be divided into three portions:

1. External genitalia—or that visible and palpable, including the penis and scrotum and its contents—testes, epididymi, vas and cord structures.

2. Lower urinary tract or that palpable and visible by endoscopic means—urethra, prostate, seminal vesicles, and bladder.

3. Upper urinary tract or that visible by radiography—ureters, kidneys, adrenals and blood supply of kidneys.

* Presented at the Seventy-sixth Annual Meeting of the Louisiana State Medical Society, Alexandria, April 25, 1956.

PHYSIOLOGY

Physiology of the kidney is manifold; but its most important function is to control water balance, electrolyte balance, and excrete nitrogenous products. The kidney is one of the vital organs and requires one-fifth of the cardiac output to execute its functions. The formation of urine is initiated by a system of pressures including the blood pressure and osmotic pressure thereby bringing from the glomerulus a protein-free filtrate which contains all of the plasma elements and the tubular system selects what it needs and concentrates the undesirables to go through the distal tubules into the kidney pelvis. From here down it is a matter of mechanical drainage.

Physiology of the testes is mainly hormonal and reproductive in that sperm are matured in the scrotum and carried via the ducts to be stored in the seminal vesicles and utilize a common outlet with the urine via the urethra and are maintained by muscular action of the sphincters. It is possible to lose the reproductive function by atrophy and still maintain hormonal balance.

ABNORMAL FINDINGS

By far the most common form of urinary tract pathology that we deal with is infection. This may involve any or all of the various anatomical divisions mentioned. The same may be said for obstruction which is next most common. Both may involve the urinary tract or the genital tract as there is no valve to prevent back flow from one to the other. Thus the contents of the posterior urethra may flow into the bladder or via the ejaculatory ducts and vas into the epididymis. Urine has been recovered in the epididymis by this same mechanism and sperm is frequently seen in the urine. Vascular disease of the kidney presents abnormal findings in the urine which may be blood, albumin, and casts. Malignant disease in the urinary tract is always fatal if allowed to be untreated, and occurs with frequency in any of the three anatomical divisions. Trauma in this mechanized age is becoming more frequently seen. The kidney,

bladder, and urethra are most commonly involved; however, the genitalia are subject to direct trauma.

DIAGNOSIS AND TREATMENT

Urology is very nearly an exact science and, with possibly the exception of the eye, the most exact science in medicine. The diagnosis is made without the aid of surgical exploration in better than 90 per cent of all cases. A good history and a careful examination stressing observation, palpation, and proper collection of a urine specimen are preliminary to any instrumental procedure. I would like to emphasize observation of the urethral meatus for the presence of a discharge which naturally disappears after voiding. A urine specimen that has been properly collected will often avoid unnecessary concern over a few pus cells in the microscopic sediment. The old two glass test is still the proper way of collecting urine and very often differentiates disease occuring in the lower urinary tract from that in the upper. In the female a catheterized urine specimen is a must before starting treatment for a urinary infection. Voided urine specimen is acceptable only if the sediment is negative for pus, blood or bacteria.

In examination of the first anatomical division the organs are before your eyes and readily palpable. Obstruction at the distal end of the urinary tract, the prepuce or meatus will eventually lead to hydronephrosis and uremia if not relieved early in life. Therefore an early circumcision and meatotomy may prevent serious kidney disease later in life.

Examination of the scrotal contents is readily accomplished with the aid of an ordinary throat light. The diagnosis of testicular tumor is made by one who thinks of every scrotal mass as being a tumor until proven otherwise. A change in consistency or size of a testicle that does not transilluminate should arouse suspicion of a tumor. This abnormal finding can be compared to its mate, if normal.

Undescended testicle should be repaired surgically before the age of ten years if a normally functioning testicle is desired. Those repaired after this age should be brought down into the scrotum in order to preserve hormonal function, provided a high-riding testicle will not result; otherwise the testicle should be removed and hernia repaired. Hormonal treatment may be employed if the patient is under nine years of age, however, this has been unsuccessful in the majority of cases.

The distal sac, in repairing a congenital hernia, should be resected from the cord to the testicle and carefully excised as near to the testicle as possible, otherwise a hydrocele will have to be excised at a later date. Another urological complication of a good hernioplasty is testicular atrophy from too tight a closure of the internal or external inguinal ring. Closure of the internal ring should be above the cord to prevent a high-riding testicle that produces testalgia. All scrotal bleeding, even the slightest ooze should be clamped and tied and a drain through a stab wound at the most dependent portion of the scrotum will often avoid a scrotal hematoma and postoperative swelling.

In trauma to the testicle, treatment is usually conservative and consists of bed rest, elevation and ice packs. However, if the scrotum looks like an egg plant in all probability surgical exploration and ligation of the bleeding points is indicated. If the testicle is ruptured, probably orchiectomy is necessary.

Sudden onset of testicular pain, swelling and vomiting in a young boy reaching puberty should bring to mind the possibility of torsion of the cord or of the appendix of the testicle and immediate surgical exploration may save a testicle.

Prostatitis with or without urethritis is usually best treated with chemotherapy, massages and sounds. Once the patient becomes asymptomatic or comfortable, treatment should be reduced to monthly or quarterly office visits with more emphasis on the microscopic sediment of the second glass urine. Urethritis in the female is also usually of chronic nature and treatment should be markedly reduced af-

ter clinical improvement has taken place.

Epididymitis is a very common complication of prostatitis, prostatic surgery, and injuries and deserves a few comments. All are familiar with the diagnosis and treatment in this condition, therefore I would like to comment on the latter associated with injuries. By increasing pressure from straining or lifting, it is possible to push the contents of the posterior urethra, whether it be infected prostatic secretion or urine, into the epididymis, thus giving rise to a full blown epididymitis. This is especially true when the patient's bladder is full of urine as the intravesicle pressure overcomes the internal sphincter and urine can flow toward the epididymis. A chemical epididymitis is the result and a condition smilar to urinary extravasation is present. The straining, if related to lifting or fall, is the exciting factor and thus compensation is allowable in most instances. Prevention is usually simple, by a bilateral vasectomy, mechanically blocking the epididymis. Unfortunately this is a sterilization procedure and should not be done without the knowledge and consent of the patient.

After examination of the abdomen, external genitalia and urinalysis, the next procedure is to examine what parts we can feel or instrument. A well lubricated finger can cut down the discomfort of a rectal examination and allow the examiner to feel about the rectum, prostate and seminal vesicles.

In all patients with obstructive symptoms, hesitancy, poor stream and dribbling, regardless of severity, instrumentation for calibration of the urethra is indicated. However, it may not be wise to do this in all cases on the first visit or in obvious prostatic obstructions or in acute illnesses. In obviously enlarged prostates, benign or malignant, not in acute retention, a P.S.P. kidney function test will best afford information as to instrumentation. In reversal P.S.P. where a smaller percentage of dye is eliminated in the first hour, certainly a large amount of residual urine can be expected and catheter drainage is a must. Whereas if the P.S.P. is normal, no infection present and the patient is not too uncomfortable, instrumentation may hasten an operative procedure and should be delayed until he is ready for surgery.

The passage of sounds and catheters has been a standard office procedure for years and should be accomplished properly by any doctor of medicine. These instruments should be sterilized daily by your nurse and kept sterile for immediate use during office hours. Any of the popular disinfectant agents are cheap and sterilization by mere soaking for twenty minutes is adequate. An assortment of sounds, catheters and guides to meet any type of urethral or prostatic obstruction would not cost over $50 and would reap benefits many times this amount. Urological patients in distress, after relief are the most gratifying patients I know of.

A few "Don'ts" may be of some help in the management of the acute retention urine. If the bladder is overdistended, more than 500 cc. urine, leave an indwelling catheter in place because the patient will not urinate once the bladder becomes overdistended. If there is obvious prostatic enlargement further study is necessary to determine if the patient is ready for surgery and preliminary drainage to re-establish fluid and electrolyte balance and bladder tone is necessary. With a catheter in place and draining well, the emergency is over for the time being. Do not use a small catheter—never less than a 14 or 16 French. Never use a catheter guide until you know the course of the channel, after having used as large a sound as the meatus will admit, never using smaller than a 20 French. Remember the tip of a size 18 French is very pointed and will penetrafe the urethra with ease. The same holds true for the catheter guide—so be careful. If the urethra is ruptured a suprapubic cystostomy is the safest procedure to do. Spontaneous rupture of the bladder is a rare bird, and if you cannot get a catheter in you still

have time to get him to a urologist if you so desire.

Pyuria is the most common abnormal finding that we come across. True pyuria, that is pus in the second glass specimen in the male in the absence of lower tract disease, warrants a complete urological survey. Pyuria in the female, that is on a catheterized urinalysis, that does not clear completely on one course of medication or recurs within a short time, in the absence of lower tract disease, requires a complete urological survey.

By a complete urological survey, I mean at least a plain scout film of the kidneys, ureter and bladder followed by an IV pyelogram, taking as many films as required to visualize the entire urinary tract. A delayed film of one or two hours sometimes shows function that does not visualize in the five, fifteen or thirty minute routine film. If the bladder does not fill completely a cystogram is indicated.

SUMMARY

In summary, I have tried to discuss the important things that you, as general practitioners, encounter in your daily work. I feel that if you spend a little time reading anatomy, physiology and pathology in regard to the outline that I have given you, the mission of this paper will have been accomplished. I sincerely hope that I have stimulated your interest in investigating common urological diseases.

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AGAMMAGLOBULINEMIA AND HYPOGAMMAGLOBULINEMIA

Agammaglobulinemia and hypogammaglobulinemia is a syndrome concerned with the resistance to bacterial infection described by Bruton [1] in 1952, The syndrome consists of a history of repeated bacterial infections, absence of naturally occurring antibodies and acquired antibodies against bacteria, low or undetectable levels of globulin, and protection against bacterial infection by maintenance injections of gamma globulin. Additional features are that the total serum proteins are within normal range and there is a failure of long term antibiotic therapy to furnish protection.

The concept that the protection against infection and the production of immune antibodies are connected with gamma globulin has been recognized in recent years. The situation in which it is abnormally low or absent is a further clarification of the repeated occurrence of bacterial infection in some patients.

Barrett and Volwiler,[2] in scientific exhibits in the A.M.A., November 27 to 30, 1956, offered a classification with four categories:

1. Congenital agammaglobulinemia, afflicting male children unable to synthetise gamma globulin.

2. Acquired hypogammaglobulinemia, affecting males or females who have lost the ability to synthetise gamma globulin for unknown reasons, and then develop bacterial infection suddenly after years of normal life.

3. Secondary hypogammaglobulinemia, a complication of diffuse reticuloendothelial disease occurring in males or females. Included in this category are patients with lymphoma, leukemia, or multiple myeloma, in which the tumor cells replace normal plasma cells or prevent their synthesis of antibodies.

4. Physiological or transient hypogammaglobulinemia of the newborn. Infants are dependent upon the maternal gamma globulin at birth, but by the age of two to three months this is depleted. The infant who is slow in starting synthesis of his own gamma globulin shows a period of deficiency, but later may attain normal levels by the age of twelve months. During the period of depletion, the infant may be comparatively defenseless against ubiquitous respiratory infections. This latter factor is responsible for some sudden deaths in infants.

Clinical manifestations of this syndrome include severe, repeated acute bacterial infections, such as pneumonia, otitis media, meningitis, and chronic bacterial in-

fections, such as bronchiectasis and chronic otitis media.

Certain routine tests may raise the suspicion of gamma globulin deficiency. Serum total globulins may be low, at 0.5 to 1.5 grams per cent. Zinc sulphate turbidity may be low, at 0 or 1 unit. Isohemagglutinins, anti-A or anti-B may be low or absent. Antibody response to typhoid or diphtheria immunization may be weak or absent.

Diagnosis may be established by serum electrophoresis, while precise determinations are dependent upon immunochemical quantitation, a method available in research centers.

The authors find that the normal range is 600 to 1400 mgms. per cent. The agammaglobulinemia range is 0 to 30 mgms. per cent, and the hypogammaglobulinemia range is 25 to 150 mgms. per cent.

The treatment of the condition is the treatment of the acute infection, on the one hand, and the attempt at prevention of recurrent infection, on the other. In the treatment of acute infections the response to antibiotics is usually good, but it is stated that the injection of gamma globulin at the time is not helpful. The prevention offers a problem, which at the present time does not have a satisfactory solution. The approach is regular injections of gamma globulin to replace the gamma globulin as it is catabolized. The dose is 0.6 to 1.0 ml. of pooled human gamma globulin per kilogram of body weight. Injections are given every three to four weeks, but it is recommended that gamma globulin in the serum be determined prior to each injection. The protection afforded is partial, and it is suggested that the injections may have to be continued indefinitely. They are painful and expensive. Some authors have described local inflammation and a diuretic effect, and also, an inhibitory effect on the bone marrow. However, it is stated that serum hepatitis has not developed.

Recognition of this syndrome will be possible for the alert observer who has adequate clinical laboratory assistance. It will offer the clinician an additional approach in prevention. It will still leave the clinician with only a partial answer to the patient's repeated question of "Why do I develop infections so frequently?" In the attempt through generations to clarify the age old problem of defense and immunity, it seemingly becomes more complicated.

1. Bruton, O. C.: Agammaglobulinemia, Pediatrics 9: 722, 1952.

2. Barrett, Beach, and Volwiler, Wade: A.M.A. Exhibit, Seattle, Washington, November 27-30, 1956.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

INTERESTING FACTS FURNISHED BY THE A.M.A. WASHINGTON OFFICE—Continued

Part II

(July 1, 1956, to June 30, 1957)

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

National Institutes of Health	$216,508,000
(Last year:	$ 97,823,000)
National Cancer Institute	$48,432,000
(Last year:	$24,828,000)

About two-thirds of this appropriation is earmarked for grants to non-Federal individual investigators and private institutions for research and training and states receive $2,250,000 for cancer control work. The balance is used for direct operations, salaries, supplies, and for this Institute's share in the cost of operating the Bethesda (Md.) Clinical Center and related auxiliary services.

National Heart Institute $33,396,000
(Last year: $18,778,000)

Grants to non-Federal individual investigators and public and private institutions for research and training take about two-thirds of the appropriation and $2,125,000 is allocated to states for heart disease control. The remainder is for direct operations, such as salaries and supplies, and to support the Clinical Center.

Mental Health Institute $35,197,000
(Last year: $18,001,000)

Approximately 60% of this appropriation is apportioned for research and training through grants to individual investigators and public and private institutions. The sum of $4,000,000 is allocated to the states for community mental health services. The remainder will support direct operations, such as salaries, expenses and to help finance the Clinical Center and for related auxiliary research services.

Arthritis & Metabolic Diseases Institute $15,885,000
(Last year: $10,740,000)

Grants to public and private investigators for research and training total $10,290,000. The remainder will go for direct operations, such as salaries and supplies and Clinical Center support.

Neurological Diseases & Blindness Institute $18,650,000
(Last year: $ 9,861,000)

Grants to public and private investigators and institutions for research and training total $14,280,000. The remainder is for direct operations, such as salaries and supplies and to support the Clinical Center.

Allergy & Infectious Diseases Institute $13,299,000
(Last year: $ 7,580,000)

Research grants to public and private investigators for research and training amount to $8,182,000. The remainder finances direct research and other related services of the Institute.

Dental Health Institute $6,026,000
(Last year: $2,136,000)

This appropriation is divided as follows: (a) for research and fellowships, $3,700,000; (b) direct research at Bethesda, $1,035,000; (c) review and approval of research grants and fellowships, $79,000; (d) administration, $100,000; (e) technical assistance to states, $824,500; and (f) coordination and development of dental resources, $287,500.

National Institutes of Health—General Funds $12,122,000
(Last year: $ 5,899,000)

These funds are administered by the Division of Research Grants of the National Institutes of Health, with practically all funds being expended for research and training grants, with the exception of $1.7 million for control of biologics (including polio vaccine), which activity is under the Division of Biologics Standards. The balance goes toward supporting fellowship and administrative expenses relating to grants.

NIH Planning and Construction ..... (new category) $33,501,000

There is available for NIH for planning or construction of facilities $33,501,000 broken down as follows: $1,630,000, expansion of surgical NIH units; $200,000, planning for future construction for dental NIH research; $1,371,000, for animal quarters, NIH; $300,000, planning for office building, NIH; $30,000,000 grants for medical research facilities under Public Law 835.

Indian Health Activities $48,075,300
(Last year: $38,840,000)

Under Public Law 568 (83rd Congress) PHS assumed responsibility for health of American Indians and natives of Alaska which formerly was a function of Interior Department. The total is broken down as follows: hospital care in Indian hospitals, $23,001,400; contract patient care, $8,313,000; field health services, $5,940,600; program direction and management services, $2,058,300; and construction of hospitals, clinics and quarters, $8,762,000. The total appropriated for Indian health activities is $48,075,300, to which is added reimbursable items from other government agencies totaling $538,300.

Hospitals and Medical Care $40,969,700

(Last year: $34,326,000)

These funds are used for operational cost and maintenance of PHS hospitals and health services in caring for American seamen, Coast Guard and Public Health Service personnel and their dependents, Federal employees injured at work, leprosy patients and narcotic addicts; includes studies in the development and coordination of nursing resources. It also includes $1,000,000 for grants to Hawaii for care of patients suffering from leprosy and $2,000,000 for nurse training grants. Not shown is approximately $800,000 additional income from reimbursable items from other Federal agencies.

Poliomyelitis Vaccine Program $23,600,000

(Last year: $30,000,000)

Public Law 411 extended last year's $30,000,000 polio vaccine program. Additional appropriated funds amounting to $23,600,000 are available in addition to unexpended appropriations of last year to states for vaccination of children under 20 and pregnant women against poliomyelitis. The Federal vaccination program is scheduled to expire on June 30, 1957.

Assistance to States—General $17,591,000

(Last year: $18,160,000)

Grants totaling $12,000,000 will be available for apportionment to the states in support of state and local general public health activities. These grants must be matched one state dollar for every two Federal dollars. Last year $4,500,000 was available for activities in administering the polio vaccination programs in the states. An additional $4,591,000 supports direct activities of the U. S. Public Health Service in providing technical assistance, consulting services to states, expenses of the National Office of Vital Statistics, international health activities, demonstrations, training activities, and operational expenses. An additional $1,000,000 will be available for grants to schools or direct traineeship awards to individuals for the training of professional public health personnel. In this program matching will be required.

Tuberculosis Control $6,660,000

(Last year: $6,000,000)

Grants to states for diagnostic and treatment clinics, mass case-finding, and follow-up services account for $4,500,000, all of which has to be matched equally by the states. The remainder is for direct operations of PHS.

Communicable Disease Control $5,750,000

(Last year: $5,250,000)

The entire appropriation is used for direct activity of the PHS Communicable Disease Center at Atlanta, Ga., and its affiliated operations, including investigations in poliomyelitis. The Center carries on studies in epidemiology, furnishes laboratory diagnostic services and sponsors special projects to assist states.

Sanitary Engineering Activities $9,000,000

(Last year: $4,690,000)

This program is made up of seven activities as follows: air pollution, $2,740,000; water supply and water pollution control, $4,224,100; radiological health activities, $347,800; milk and food sanitation activities, $446,000; interstate carrier and general sanitation activities, $493,000; Sanitary Engineering Center research activities $403,100; accident prevention, $51,000; and administration, $295,000.

Venereal Disease Control $4,195,000

(Last year: $3,500,000)

Of the total, $1,700,000 goes for direct grants to states for venereal disease detection, treatment and control on a special-need basis. The remainder is spent for technical assistance to the states, mostly to pay Federal employees assigned to state health departments.

Foreign Quarantine Service $3,315,000

(Last year: $3,000,000)

This service operates approximately 250 medical quarantine stations on borders of the United States. It also operates approximately 25 medical examination stations on foreign soil for the examination of aliens seeking visas to enter the U. S. Inspections are made of all seagoing vessels and aircraft entering the U. S.

Office of the Surgeon General $3,892,000
(Last year: $2,762,000)

For administrative expenses of this office, including all housekeeping services, evaluation of public health needs, and personnel training. Included also is $700,000 for administration of the National Health Survey Act authorized by Public Law 652.

Water Pollution Control ..... (new category) $50,000,000

Under a new law passed by Congress in 1956 (P.L. 660), the Federal government will make grants for waste treatment plants.

National Library of Medicine ..... (new category) $1,376,000

As a result of Public Law 941 enacted by Congress in 1956, the Army Medical Library has been renamed the National Library of Medicine and transferred to the Department of Health, Education, and Welfare. While it is contemplated that a new structure will be erected to house the library, only operational funds and planning money have been made available by Congress for this fiscal year. Operational funds for the nine months which remained in the fiscal year following the transfer of the library to HEW total $1,026,000. An appropriation of $350,000 was made for planning the construction of a new library building.

Alaska—Disease & Sanitation Investigations & Control $1,185,000
(Last year: $1,250,000)

This appropriation will be divided as follows: $638,000 for grants to the Territory for public health services and the remainder for research activities of the Arctic Health Research Center at Anchorage.

Alaska Mental Health Program ..... (new category) $25,000

Authorized by Public Law 830, which calls for the construction of a mental health hospital in Alaska and Federal funds for operation of a mental health program. The first appropriation is for initial planning.

Reimbursable Health Program for Other Governmental Agencies $321,800
(Last year: $321,800)

This represents the cost of services expected to be advanced by Public Health Service to other governmental agencies for establishing and operating on-the-job clinics. As a total, however, it is misleading, as a substantial number of government agencies carry on their own health programs independent of PHS. PHS deals largely with Washington personnel, whereas 90% of the government's employees are located outside of Washington.

Social Security Administration $161,183,000
(Last year: $125,796,600)

Bureau of Public Assistance (medical payments) ..... Approx. $100,000,000
(Last year: $ 90,000,000)

An estimated $265,000,000 of Federal, state and local funds is expected to be paid for medical and health needs of public assistance recipients this fiscal year. The U. S. share of this total is an estimated $100,000,000. This bureau operates under the Social Security Administration.

Disability Freeze Program ..... (new category) Approx. $9,000,000

Among the administrative expenses of the Old Age and Survivors Insurance program, is an item incurred by excusing disabled persons from paying OASI contributions without penalty in their retirement payments. This phase of the program is referred to as the "disability freeze" amendment to the Social Security Act. This year approximately $9,000,000 will be expended for employees' salaries, working materials, etc.

Permanent and Total Disability Payments ..... (new category) Approx. $11,000,000

Under the 1956 amendments to the Social Security Act, persons over age 50 who become permanently and totally disabled may receive payments equal to retirement benefits as though they had reached age 65. This new program will take effect on July 1, 1957. This fiscal year, however, expenses will be incurred for "tooling up". These expenses will include recruiting of additional staff for field offices, training of staff, revising manual materials, negotiation of new agreements with state agencies for rehabilitation and the furnishing of new materials for states to use, such as forms, etc.

Children's Bureau $41,183,000

(Last year: $35,796,600)

Operating under the Social Security Administration, the Children's Bureau administers grants to states for maternal and child health, and crippled children's and child welfare services. This year grant money totals $39,361,000, divided as follows: $16,000,000 for maternal and child health work, with the states required to spend approximately 50 cents for each Federal dollar; $15,000,000 for crippled children's services, same matching requirement; and $8,361,000 for child welfare services, where the only matching requirement is that states must supply some money. In addition the Children's Bureau has $1,822,000 to finance investigating and reporting activities and to administer the grants.

Food and Drug Administration $7,979,000

(Last year: $6,266,000)

For administering the Federal Food, Drug and Cosmetic Act, Congress voted $6,779,000, which includes $309,000 for policing the distribution of Salk polio vaccine during this fiscal year. FDA will also realize an estimated $1,200,000 from fees paid by industry for certification of biologics, insulin, seafood, etc. The figure for last year does not include fees.

Office of Vocational Rehabilitation $42,110,000

(Last year: $36,825,000)

Under the expanded Vocational Rehabilitation Act (Public Law 565, 83rd Congress) Congress this year voted $36,000,000 for grants to states. This is divided as follows: (a) support of basic rehabilitation services including medical examinations, surgical and therapeutic treatment, hospitalization, prostheses, occupational tools and aids, vending stands, rehabilitation facilities, vocational training and funds for maintenance (based on per capita income and populations as in Hill-Burton), $33,500,000; (b) extension and improvement of state programs, $1,500,000; (c) special grants to states or nonprofit organizations for projects designed to expand the rehabilitation program (2-1 Federal-state matching), $1,000,000. In addition $2,950,000 is available for training of rehabilitation personnel, including physicians, therapists, psychologists, counselors, medical and psychiatric social workers; $2,000,000 for grants to states and other public and nonprofit agencies and organizations to pay part of the cost of special research and demonstration projects in vocational rehabilitation; and $1,160,000 for Federal administrative costs.

U. S. Office of Education ..... Approx. $2,545,000

(Last year: not reported)

Practical Nurse Training: For a goodly number of years the Office of Education has been making grants to states for vocational education in all fields of endeavor. It is estimated that during the last fiscal year approximately $500,000 in grants was used to educate practical nurses. For this year, the Office of Education has available $31,267,000 for grants to states. Included in this figure is $2,000,000 earmarked funds recently authorized by Congress (practical nurses). An appropriation was voted in this amount, plus an additional $45,000 for added costs of administration. Office of Education officials believe that the states will not diminish the level of last year's program, which would mean approximately $2,545,000 is available for practical nurse education.

FEDERAL CIVIL DEFENSE ADMINISTRATION

(This Year: $49,810,000 — Last Year: $30,450,000)

Projected health and medical spending by FCDA this year moves close to the $50,000,000 mark for the first time. Out of a total appropriation of $93,560,000, the estimated $49,810,000 spending for the FCDA health office includes $47,000,000 for stockpiling medical and other supplies owned wholly by the Federal government, $1,700,000 for matching funds to the states to help them in their medical stockpiling, $810,000 for research and $300,000 for administration costs.

ATOMIC ENERGY COMMISSION

(This Year: $31,525,000 — Last year: $27,700,000)

The Atomic Energy Commission's Division of Biology and Medicine has about $2.7 million more than last year for research projects. This year's total includes the following spending plans: cancer, $3,002,000; other medical, $9,729,000; biological, $10,821,000; biophysical, $3,459,000; development of new laboratory equipment, $2,319,000; vocational and special training, $615,000; radioisotope distribution, $510,000; and miscellaneous items, $1,070,000.

INTERNATIONAL COOPERATION ADMINISTRATION

(This Year: $29,310,000 — Last Year: $25,441,000)

Technical Cooperation Programs $16,380,000

(Last year: $20,141,000)

The International Cooperation Administration through direct contributions (which do not have to be matched dollar for dollar) is helping underdeveloped countries to control specific diseases, to set up national and local health services and to establish environmental sanitation. Countries receiving money make contributions in cash, facilities or services in varying degrees.

Development Assistance Programs $12,930,000

(Last year: $ 5,300,000)

Spending for emergency health programs (particularly in malaria control on which there is new world-wide emphasis) under ICA direction is up from last year. The agency has $2,500,000 for the Far East, and $10,430,000 for the Near East, South Asia and Africa. The largest single beneficiary will be India.

DEPARTMENT OF STATE

(This Year: $15,496,000 — Last Year: $13,669,790)

United Nations Children's Fund $9,700,000

(Last year: $9,000,000)

The U. S. share of the Children's Fund is up about $700,000 over last year for a total of $9,700,000, but the percentage of U. S. contribution to the total fund has dropped slightly from 60% to 57.5%. This is due to the fact that some of the 65 other nations contributing have increased their share slightly. The fund is aiding about 264 health and medical projects in 92 countries and territories, benefiting 32 million children and mothers. Last year the fund aided 1,800,000 children for yaws, vaccinated 14,500,000 against tuberculosis, and 9,000,000 against malaria and other insect-borne diseases.

World Health Organization $3,410,000

(Last year: $3,349,790)

This country's share of the WHO budget remains at one-third of the total of all member-nation contributions. Among the 84 countries agreeing to make contributions is Russia, which until recently has been inactive. Last year WHO was sponsoring about 500 health projects in 106 countries and territories. WHO's overall budget is broken down this way: approximately 72% for operating programs, 10% for administration and salaries, and the rest for such expenses as holding international conferences and to compensate for non-payment by inactive member-countries.

Pan American Sanitary Bureau $1,386,000

(Last year: $1,320,000)

The U. S. is contributing approximately two-thirds of the Bureau's regular budget which this year totals $2,100,000. In addition, this country plans an extra $1,500,000 for 1957 malaria eradication programs. Because these international groups operate on a calendar year, the special contribution is not shown in this report. The Bureau, in existence many years before WHO was organized, is the regional office of WHO for the Americans. The Bureau is sponsoring health programs in 21 Latin American countries and the U. S.

Foreign Service Employees Medical Care ..... (new category) $1,000,000

The 84th Congress, under Public Law 828, broadened an existing medical care program for foreign service employees to take in their dependents, provided they are living overseas. State Department, which estimates that about 15,000 dependents are involved, has earmarked $400,000 for the first year. The regular program for overseas employees is placed at $600,000. Most of the care is provided in U. S. military facilities.

FEDERAL EMPLOYEES HEALTH PROGRAM

(This Year: approx. $10,000,000 — Last Year: approx. $6,000,000)

Another health program, this one available to all Federal civilian workers, provides limited services through health clinics. They are operated by Federal agencies which employ 300 or more persons in any one area. By regulation, maximum cost of a health service cannot exceed $11 a year per employee, although special industrial conditions or minimal size unit may warrant a higher ceiling. Services include treatment for on-the-job illnesses and physical examinations for employment.

NATIONAL SCIENCE FOUNDATION

(This Year: $8,000,000 — Last Year: $5,000,000)

The Foundation's overall budget of $40,000,000 is two and a half times last year's appropriation. While money earmarked for research grants in biological and medical sciences this year does not show the same proportionate increase, it is still considerably above fiscal 1956. The Foundation, now in its sixth year, initiates and supports basic scientific research, evaluates research of government agencies, and correlates research programs of various agencies.

DEPARTMENT OF LABOR

(This Year: $7,151,126 — Last Year: $7,336,000)

Bureau of Employees' Compensation $6,600,000

(Last year: $6,800,000)

An estimated 2,390,000 Federal workers now are eligible under the Federal Employees' Compensation Act for medical and hospital care, rehabilitation services, disability and death payments, and funeral and burial expenses. For treatment of employees by private doctors and hospitalization in private facilities, Labor Department has set aside $4,500,000 this fiscal year, and for similar services in Federal hospitals and clinics, $2,100,000. A slight shift is noted away from Federal facilities to private resources; last year's totals were $4,349,218 and $2,234,222.

Bureau of Labor Standards $551,126

(Last year: $536,000)

For promotion of industrial safety, the Bureau plans to spend $387,322, and for re-employment programs of the physically handicapped, $163,804. The agency develops standards for hazardous occupations, assists the states in accident prevention programs and trains personnel for administering various projects.

DEPARTMENT OF INTERIOR

(This Year: $6,138,205 — Last Year: $5,770,000)

Bureau of Mines $5,304,300

(Last year: $5,000,000)

Bureau spending for preventive health and safety in the mines is up from last year. The total is divided this way: $3,874,300 for mine inspection and investigations; $898,000 for investigations of accidents and rescue work, and $532,000 for explosives testing and research.

Office of Territories $833,905

(Last year: $770,000)

Sometime after the first of the year the money earmarked for contract hospitalization at Morningside Hospital, Portland, Oregon, of Alaskans judged insane will be transferred to the Territory of Alaska under Public Law 830, the Alaska Mental Health Act. This law provides that the Territory, with the help of the Public Health Service, will set up its own programs for the mentally ill.

PANAMA CANAL ZONE

(This Year: $6,055,300 — Last Year: 5,702,900)

The total available for health and medical programs in the Panama Canal Zone is divided: $5,452,400 for operation of three hospitals, one leprosarium, one medical clinic, two dental clinics and six first aid stations at which Zone employees, their dependents and other Zone residents receive treatment, and $602,900 for public health activities and operations of the health director's office. The three hospitals have a bed capacity of 1,167.

DEPARTMENT OF TREASURY

(This Year: $3,511,700 — Last Year: $2,990,000)

The Bureau of Narcotics, operating within the Treasury Department, has added responsibilities under Public Law 728, 84th Cong., for the suppression of illegal traffic in drugs, and accordingly, spending plans are up from last year. The Bureau also is charged with administering the oral prescription law, P. L. 729, 83rd Cong.

DEPARTMENT OF JUSTICE

(This Year: $1,580,000 — Last Year: $1,470,000)

The figure represents the Bureau of Prisons' estimate of the cost of medical and dental services for over 20,000 prisoners in 29 Federal penal institutions. The bulk (about $1,490,000) goes to commissioned officers of the Public Health Service assigned to the prisons and to related civil service personnel for services that include psychiatric, surgical and dental treatment. Another $90,000 is earmarked for fees to 220 consultants in various medical specialties.

FEDERAL TRADE COMMISSION
(This Year: $1,000,000 — Last Year: $1,000,000)

The Commission plans to spend about the same as last year for research, testing and compliance operations in the field of foods, drugs, cosmetics and devices. This is nearly 20% of the agency's total budget of $5,550,000. FTC is charged by Congress with the safeguarding of life and health of the public through the prevention of the dissemination of false advertisements of various products.

DEPARTMENT OF COMMERCE
(This Year: $547,914 — Last Year: $277,586)

Civil Aeronautics Administration $419,414
(Last year: $223,486)

Spending for the CAA flight safety program is well ahead of last year. It is divided as follows: $197,315 for salaries and administrative expenses at headquarters, $74,399 for similar expenses in regional office, $47,700 for the CAA Medical Research Laboratory at Columbus, Ohio, and a special grant of $100,000 to the Flight Safety Foundation. Four medical officers in the field supervise the periodic physical examinations required of commercial and private pilots. For this service, pilots pay examining physicians directly; CAA has 1,774 designated medical examiners in the U. S. and overseas who make about 180,000 examinations a year.

Bureau of Standards $128,500
(Last year: $ 54,100)

For highly specialized medical research and testing, the Bureau expects to spend about $579,300 for various agencies of government; of this $128,500 will involve Commerce funds, with the rest charged to the other agencies. Projects include research on radiation protection, radiological instrument evaluation, acoustic calibration, x-ray standards, and dental materials.

CIVIL SERVICE COMMISSION
(This Year: $386,000 — Last Year: $382,600)

The Commission's total budget is $17,407,500, out of which little over 2% goes for running the medical division. It covers salaries for eight physicians in Washington and eleven in regional offices. The medical division's duties include establishing and reviewing physical standards for all civilian jobs in the Federal government, supervising and adjudicating disability claims for retirement, and setting professional standards of doctors and ancillary personnel to be employed in government.

NATIONAL ADVISORY COMMITTEE TO SELECTIVE SERVICE
(This Year: $180,000 — Last Year: $180,000)

The figure is the amount the Committee has available for staff salaries at Washington headquarters and its 51 state and territorial offices, plus administrative costs. The Committee advises Selective Service on deferment policies for physicians in residencies, teaching posts, essential laboratory and clinical research, and persons deemed necessary to protect civilian health.

PRESIDENT'S COMMITTEE FOR EMPLOYMENT OF PHYSICALLY HANDICAPPED
(This Year: $134,678 — Last Year: $130,000)

Projected spending is for salaries and administration in the development and promotion of educational programs among employers to stimulate them to hire more of the physically handicapped. It also entails expenses in connection with the National Employ the Physically Handicapped Week.

HEALTH RESOURCES ADVISORY COMMITTEE
(This Year: $90,000 — Last Year: $101,000)

The Committee advises the director of the Office of Defense Mobilization on broad health resources problems, including medical manpower and blood and related products. The Committee has the same membership as the National Advisory Committee to Selective Service.

OFFICE OF THE ATTENDING PHYSICIAN OF CONGRESS
(This Year: $12,145)

Since 1928, the Office of the Attending Physician of Congress has provided out-patient care for members of the House and Senate and their staffs. By the act of that year, the office has been filled by a medical officer of the United States Navy. Sole occupant of the post has been Rear Admiral George W. Calver (M.C.), U.S.N. Funds voted by Congress are for medical supplies and equipment and contingent expenses. Salaries of the physicians and four enlisted men are paid out of Navy Bureau of Medicine and Surgery funds.

PARTIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES AMERICAN MEDICAL ASSOCIATION TENTH CLINICAL MEETING

NOV. 27 - 30, 1956

Seattle, Wash.

Medical ethics, veterans' medical care, radioactive isotopes, continuance of the A. M. A. interim session, hospitalization for patients with alcoholism and a report of the Committee on Medical Practices were among the wide variety of subjects acted upon by the House of Delegates at the American Medical Association's Tenth Clinical Meeting held Nov. 27-30 in Seattle.

Dr. Edward M. Gans of Harlowton, Montana, was announced at the opening session, Tuesday, as the 1956 General Practitioner of the Year. The annual award, carrying with it a gold medal and a citation, is presented to a family doctor selected by a special committee of the Board of Trustees for outstanding community service. Dr. Gans, who is 80 years old, has practiced medicine for 51 years and has been in the Harlowton area for the past 44 years.

Strongly condemning government intervention in medicine, Dr. Dwight H. Murray of Napa, Calif., A. M. A. President, told the opening session that "the medical profession, along with business and industry, is caught between those who desire to promote sound government programs and those who desire even more intensely to perpetuate party politics. Unfortunately, in recent years a benevolent federal government appears more attractive to the voting public than the preservation of individual freedoms. Medicine must do its utmost to reverse this trend."

Total registration at the end of the third day of the meeting, with half a day still to go, had reached 5,191, including 2,738 practicing physicians and 2,453 residents, interns, medical students, nurses and guests.

Medical Ethics

Subject of greatest interest at Seattle was the proposed, ten-section revision of the Principles of Medical Ethics originally submitted at the June, 1956, Annual Meeting in Chicago, where final action was deferred until the Seattle session. The proposed short version of the Principles was resubmitted with some changes based on suggestions received since last June by the Council on Constitution and By-Laws. The House of Delegates, however, decided to refer the matter back to the Council on Constitution and By-Laws for further study and consideration. The reference committee report adopted by the House included the following statements:

"Careful consideration was given to the Preamble and the ten sections of the proposed Principles. The Preamble and seven of the ten sections appear to be acceptable in their present form.

"Sections 6 and 7 were not acceptable as presented either to the group which appeared at the hearing or to your reference committee.

"Out of the general discussion the reference committee received the crystallized opinion that at least four areas needed more specific attention in Sections 6 and 7. These are:

"(1) Division of fees;

"(2) The dispensing of drugs and appliances;

"(3) The corporate practice of medicine;

"(4) Greater emphasis concerning the relationship between physicians and patients.

"In addition, the reference committee felt that the wording in Section 10 could be improved if amended to read as follows:

> " 'The responsibilities of the physician extend not only to the individual but also to society and deserve his interest and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.'

"In view of the above your reference committee believes that the proposed Principles of Medical Ethics should be referred back to the Council on Constitution and By-Laws for further study and consideration of the above stated principles.

"In the short space of time at our disposal and in view of the importance of the subject, your reference committee did not deem it wise to attempt to properly phrase these concepts.

"We would also recommend that if possible this study be completed at least six weeks prior to the June session and that the new version be published in THE JOURNAL in order that all interested physicians might have an opportunity to comment thereon."

Veterans' Medical Care

The House revised A. M. A. policy on veterans' medical care by endorsing in principle the following paragraph suggested by the Council on Medical Service:

"With respect to the provision of medical care and hospitalization benefits for veterans in Veterans Administration and other federal hospitals that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated."

This action eliminates the temporary exceptions which were made in the June, 1953, policy regarding wartime veterans who are unable to defray the expenses of necessary hospitalization for non-service-connected cases of tuberculosis or psychiatric or neurological disorders. In making the policy change, the House approved this supplementary statement:

"We recognize the laws and administrative extensions of the law that are now in operation. We feel that under the circumstances it will be to the best interests of the public in general, and veterans in particular, if medical societies, coun-

ty and state as well as national, develop committees to assist in guaranteeing VA hospital admission to service-connected cases. While the present law exists, we should help assure that veterans whose illness constitutes economic disaster will not be displaced by those suffering short-term remediable ills which, at the worst, constitute financial inconvenience."

In another action concerning veterans, the House passed two resolutions condemning as unlawful the practice of Veterans Administration hospitals which admit patients who are covered by workman's compensation insurance or by private health insurance and which render bills for the cost of their care. Both resolutions requested the A. M. A. to take action to bring about a discontinuance of such practices by VA hospitals, and one of them instructed the Association Secretary to obtain from each state testimony or records of each known case that violates VA Reg. 6047-D1.

Radioactive Isotopes

The House rescinded the June, 1951, action, which limited the hospital use of radium and radioactive isotopes to board-certified radiologists, by approving a new policy statement which says:

"(1) In any hospital in which a patient is to receive radium or the products of radium or artificially produced isotopes, there should be a duly appointed Committee on Radium and Artificially Produced Radioisotopes of the hospital professional staff. This committee should include, but not necessarily be limited to, the following qualified physicians: a radiologist, a surgeon, an internist, a gynecologist, a urologist and a pathologist. This committee should have available such competent consultation of other physicians and scientific personnel as may be required by it. Where this is not practicable, the hospital staff should consult the nearest Committee on Radium and Artifically Produced Radioisotopes.

"(2) In any hospital, the use of radium or its products and artifically produced radioactive isotopes for diagnostic or therapeutic purposes shall be restricted to qualified physicians so judged by the Committee on Radium and Artifically Produced Radioisotopes of the professional staff to be adequately trained and competent in their particular use.

"(3) It is recommended that procurement, storage, dosimetry control and inventory of all radioactive isotopes for the use of the hospital staff and radiological safety control be centralized, and, where administratively possible, centralization be located in the Department of Radiology.

"(4) It is recommended that the Board of Trustees assign to the appropriate council or committee the continuous study of the problems of radiological safety control in the use of radium and its products and artificially produced radioactive isotopes for diagnostic or therapeutic purposes."

Clinical Meetings.

Rejecting a resolution which recommended discontinuance of the interim sessions, or clinical meetings, the House adopted a reference committee report which said:

"We believe that the interim sessions should be continued because of the public relations value of these meetings to the Association and the educational value to physicians and the general public in the various geographical areas involved.

"It is the suggestion of the reference committee that maximum attention be given to these potential benefits in selecting a city for the interim meeting.

"It is our further recommendation that the Board of Trustees consider the advisability of holding an Interim Meeting of the House of Delegates in Chicago each November or December and an Interim Scientific Session in November or December of each year in different parts of the United States. The reference committee suggests that the views of the Board of Trustees in this regard be reported to the House of Delegates next June."

Hospitalization for Alcoholics

To implement educational approaches to the problem of alcoholism, the House approved a statement submitted through the Board of Trustees by the Council on Mental Health and its Committee on Alcoholism. The House also recommended that the statement be brought to the attention of the Council on Medical Education and Hospitals, the Joint Commission on Accreditation of Hospitals and the American Hospital Association. It includes the following:

"The Council on Mental Health urges hospital administrators and the staffs of hospitals to look upon alcoholism as a medical problem and to admit patients who are alcoholics to their hospitals for treatment, such admission to be made after due examination, investigation and consideration of the individual patient. Chronic alcoholism should not be considered as an illness which bars admission to a hospital, but rather as qualification for admission when the patient requests such admission and is cooperative, and the attending physician's opinion and that of hospital personnel should be considered. The chronic alcoholic in an acute phase can be, and often is, a medical emergency."

Committee on Medical Practices

In approving a progress report of the Committee on Medical Practices, the House amended one of its directives to read as follows in order to remove any legal objections:

"The A. M. A. representatives on the Joint Commission on Accreditation of Hospitals be instructed to stimulate action by that body leading

to the warning, provisional accreditation, or removal of accreditation of community or general hospitals which exclude or arbitrarily restrict hospital privileges for generalists as a class regardless of their individual professional competence where such policies adversely affect the quality of patient care rendered. Any action taken should be only after appeal to the Commission by the county medical society concerned."

The House also approved a recommendation by the Committee on Medical Practices that a study group be formed to consider the best background preparations for general practice, and it urged that such action be implemented as soon as practicable.

Miscellaneous Actions

Among many other actions on a wide variety of subjects, the House of Delegates also:

Urged the widest possible publication and distribution of Dr. Murray's **presidential address** at the opening session;

Pledged the full support of the Association's initiative and energy to President Eisenhower's **people-to-people program** as a means of promoting understanding, peace and progress;

Directed the Board of Trustee to continue its investigation of the practicability of developing a **statement of A. M. A. policies** and to arrange for the periodic publication of revised versions of such a policy statement;

Commended the objectives of the American Association of **Medical Assistants** and its sincere desire to work closely with the medical profession in improving medical service and medical public relations;

Noted with pride the good work being done by the 74,348 members of the **Woman's Auxiliary,** as reported to the House by Mrs. Robert Flanders, President;

Directed the Councils on Pharmacy and Chemistry and on Foods and Nutrition to conduct a joint study of all presently available information concerning the **fluoridation of public water supplies** and to present a documented report of findings and recommendations at the December, 1957, meeting;

Urged all physicians to participate actively in the formulation of medical policy for **prepaid medical care plans** which are under physician direction or sponsorship;

Changed the By-laws to extend **service membership** to reserve officers on extended active duty with the defense forces and the U. S. Public Health Service;

Changed the By-laws relating to **transfer of membership** so that an active or associate member of the Association who moves his practice to another jurisdiction may continue his A. M. A. membership by applying for membership in the constituent association in his new jurisdiction, subject to a two-year limit on approval of his application;

Changed the By-laws so that the **election of officers** may take place at any time on the fourth day of the annual session, instead of being restricted to the afternoon of that day;

Passed a resolution calling for the American Medical Association to join with the American Hospital Association and the American Institute of Architects in their proposed **study of hospital design and construction;**

Approved the principle of a voluntary reduction in the self-assigned **quota of interns** as printed in the 1956 handbook of the National Intern Matching Program, and

Instructed the Board of Trustees to accentuate cooperation between the American Medical Association and the American Bar Association to the end that a bill of the **Jenkins-Keogh** type be enacted at the next session of Congress.

Opening Session

At the Tuesday opening session Dr. Murray, on behalf of the American Medical Association, presented a special citation to Ciba Pharmaceutical Products, Inc., for "the service it has performed to the medical profession and to the nation through its weekly television series, 'Medical Horizons'." At the same session the American Medical Association and four of its constituent societies — California, Arizona, Utah and New Jersey — contributed nearly $300,000 to the American Medical Education Foundation for aid to the nation's medical schools. The A. M. A. announced another gift of $125,000, bringing this year's total contribution to $343,000. The amounts presented by the four states were: California, $132,981; New Jersey, $25,000; Utah, $11,870, and Arizona, $3,695.

George F. Lull, M. D.
Secretary-General Manager
American Medical Assoication

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MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Calcasieu	Fourth Tuesday every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Morehouse	Third Thursday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

LEPTOSPIROSIS

Charles T. Caraway, D.V.M., Epidemiologist with the Louisiana State Department of Health, calls attention to the occurrence of human leptospirosis and recommends that physicians be on the alert for this disease when patients, especially livestock owners, farm workers, slaughterhouse workers and others who have intimate contact with pets, present themselves with a history of animal contact, chills, fever, nausea, vomiting, muscular pains, conjunctivitis or findings suggestive of pneumonia or meningitis.

Leptospirosis in animals is a fairly common disease and is a threat to all persons who have close contact with animals or rodents.

Human leptospirosis is a recreational as well as an occupational disease.

In July 1950 an outbreak due to **L. pomona** occurred in Alabama. About 50 of 80 persons who had been swimming in a creek developed leptospirosis. Dead hogs had been floating in the creek and its branches. Sera obtained from hogs, cows, horses and mules that had access to the stream showed positive tests for **L. pomona** infection.

North Carolina has reported a case of leptospirosis due to **L. pomona** in an 8 year old negro boy who had contact with an infected milk goat. Goat urine could also have contaminated the shallow well from which this child obtained drinking water. Ante mortem tests on the goat's serum were positive for **L. pomona**. The goat was sacrificed and post mortem **L. pomona** was isolated from its tissues.

L icterohaemorrhagiae was isolated post mortem from the kidney of a pet dog in Louisiana. About ten days later his owner became ill. His symptoms were fever, backache, headache, nausea and vomiting. Serological studies indicated that the owner had also experienced an infection with **L. icterohaemorrhagiae.** Five other members of this man's household had an illness, at the same time, compatible with a mild leptospirosis; however, the Department of Health was unable to confirm the diagnosis in these five people who received treatment early in their illness.

Other human cases of leptospirosis in Louisiana have been investigated in which the evidence suggested domestic animals as the source of infection.

The Department of Health believes that many human cases of leptospirosis are occurring which remain unrecognized.

Physicians desiring serologic study of their suspect cases can submit 10-20 cc. of serum or blood from the suspect to the State Department of Health Laboratory serving their part of the state. The request which accompanies the specimen should show the name, age, sex, race, and address of the patient, whether or not the patient is hospitalized, and if so, the name of the hospital, and the name and address of the physician to whom the report is to be sent. A short clinical history should also accompany the specimen.

The blood or serum should be submitted as a paired specimen with the first blood being collected during the acute illness, or as soon thereafter as possible, and the second blood 2-4 weeks after the first. The data sheet accompanying the specimens should show whether the specimen is the first or second of the sample, and, if the first, whether or not a second (convalescent) specimen is to follow.

The Department of Health will do a titered complement-fixation test on the specimens and the results will be sent to the physician as soon as they are available.

PORTABLE ELECTRONIC CARDIAC MONITOR DESCRIBED

A three-pound, 120-cubic-inch device which shows visually the electrical impulses of the

heart during surgery or resuscitation was described recently.

Six researchers from the Veterans Administration Hospital, Hines, Ill., said the cardiac monitor was devised to help surgeons and anesthesiologists during surgery, but it could be used by police and fire department rescue and resuscitation squads to tell if the heart is functioning in cases of drowning, electric shock, auto accidents, and severe injury.

The electronic monitor, which is powered by four flashlight batteries, was described in the Oct. 6 1956 Journal of the American Medical Association. Electrodes attached to the forearms of the patient pick up the cardiac impulses and feed them into the monitor where they are indicated by a magnetic needle.

If the heart is functioning normally, the needle shows a uniform movement. However, when the needle produces small, irregular and erratic movements, it is a sign of ventricular fibrillation, a condition in which the heart ceases to beat regularly and the muscle twitches. Cardiac arrest—or sudden unexplained heart stoppage—is indicated when the needle stops altogether.

The monitor is especially useful, the authors said, in situations of extreme shock, severe hemorrhage or suffocation where blood pressure and pulse rate sometimes may fall to imperceptible levels. In such cases the monitor can show that the heart is still functioning even though there is no detectable pulse. This should prevent unnecessary opening of the chest for cardiac massage and speed the beginning of proper treatment, they said.

SYMPOSIUM ON FATS IN HUMAN NUTRITION

A symposium on Fats in Human Nutrition with particular attention to Fats, Cholesterol and Atherosclerosis will be held in New Orleans, March 15, 1957. It will be cosponsored by the New Orleans Graduate Medical Assembly, the Orleans Parish Medical Society, Louisiana State University School of Medicine, Tulane University School of Medicine, and the Council on Foods and Nutrition of the American Medical Association. Speakers of national prominence have been invited to participate, including Dr. Edward H. Ahrens, Jr., Associate Physician, Rockefeller Institute Hospital; Dr. W. Stanley Hartcroft, Chairman, Department of Pathology, Washington University Medical School; Dr. L. Emmett Holt, Jr., Director of Pediatrics, New York University, College of Medicine; Dr. Ancel Keys, Director, Laboratory of Physiological Hygiene, University of Minnesota; Dr. Frederick J. Stare, Chief, Department of Nutrition, Harvard University School of Public Health; and Dr. Donald S. Frederickson, National Heart Institute. The American Academy of General Practice is offering six hours of formal credit to those who attend.

This symposium follows the twentieth annual meeting of The New Orleans Graduate Medical Assembly.

Plan now to stay an extra day and attend this meeting.

LIST OF HABIT-FORMING QUALITIES OF MEPROBAMATE

A Seattle physician warned that the tranquilizing drug, meprobamate (Miltown or Equanil), can be habit-forming in a small percentage of cases.

Dr. Frederick Lemere gave his warning because of the unprecedented demand for the drug, because of talk of selling meprobamate over the counter without a prescription, and because it has been advertised as non-habit forming.

He has seen a few individuals show the standard symptoms of addiction, including a psychological craving for the drug based on its pleasant effects, a build-up or tolerance requiring increasingly larger doses to produce the same effect, and withdrawal symptoms when the drug is suddenly discontinued.

However, meprobamate is still the "most helpful and least harmful of all drugs used for the relief of nervous and emotional tension," but its habit-forming qualities for some persons indicates the necessity for careful supervision of its use, Dr. Lemere said in the August 1956 Archives of Neurology and Psychiatry, published by the American Medical Association.

Dr. Lemere noted withdrawal symptoms among some of his patients. These included feelings of "nervousness," "the jitters," or "let down" when the patients missed their usual doses of meprobamate. One patient experienced the first convulsion of his life 10 hours after discontinuing the medicine. While this may be coincidence, the pattern was similar to the convulsions seen after sudden withdrawal from alcohol or barbiturates.

"A psychological dependency on the drug is also undoubtedly created in certain patients," he said.

Many feel so much less tense when taking the drug that there may be an exaggerated feeling of well-being. In most cases this does not appear to be harmful, but in a few patients it may lead to overdosage on the basis that "if one pill helps, three will help three times as much," he said.

POSTGRADUATE CONFERENCE

The Temple Division of the University of Texas Postgraduate School of Medicine offers the **Fifth** SCOTT, SHERWOOD AND BRINDLEY FOUNDATION **Postgraduate Conference** in Medicine and Surgery on March 4, 5, 6, 1957. For detailed information write: Director, Scott, Sherwood and Brindley Foundation, Scott and White Clinic, Temple, Texas.

WOMAN'S AUXILIARY TO THE LOUISIANA STATE MEDICAL SOCIETY

Old St. Nick was the guest of honor Wednesday, December 12th at the Orleans Club, where the Woman's Auxiliary to the Orleans Parish Medical Society held a Christmas Party for the children and grandchildren of the members. Mrs. John Toole's dramatic pupils entertained the group.

Hostesses for the event were Mms. Peter Everett, Isidore Dyer, Homer Dupuy, Joel B. Gray, Milton L. McCall, A. J. McComiskey, Lawrence McCune, Howard Mahorner, Howard Russell, Paul L. Getzoff, Joseph D. Russ, and Edwin R. Guidry. Pouring tea and coffee were Mrs. Reichard Kahle and Mrs. Robert Rougelot.

These are some of the good little boys and girls to whom Santa gave toys and candy: Deborah and John Currier III, David and Daniel Silverman III, Linda McCall, Lynn and Ann Schneider, Maureen, Kathleen and John Walsh, Jr., Vince and JoAnn DiLeo, Paul Giarlendo, Sandy Ward, David Parker, Linda Golden, Ellen Tomskey, Mary Carol Guidry, Nathan and Debra Jean Fischman, Judy Davis, Wallace, Mary Clare, Judy, Lynn, Peggy and Elizabeth Landry, Tyra, Agna and Elsa Caire, Randy and Lawrence McCall, Catherine Sherwood, Mary Franklin Johnson, Mary Catherine, Martha, Patricia and Joe Hopkins, Shannon and Janet Comer, Paul Rosenthal, Betsy McGinnis, Adelaide and Olivia Hebert, Marie Lucille Pollingue, Don Faust, Thomas E. Campbell, Lee Washburn, Fran and Brownell Chalstrom, Eric, Richard and Frank Oser III, Mary Elizabeth, Shirley Ann and Alice Mary Muhleisen, Hugh Dyer, Lynne Harris, Charles, Debrah, and Charlotte Bahn, Jan and Kenneth Gillespie, Sidney, Louise and Anne Tiblier, Janet, Paul and Stephen Mogabgab, Penelope, Stephen and Jody Cranfield, Suzanne, George, Kenneth and Barrett Haik, Blaise and Laurence Salatich, Anita Morrison, Paul Lastrapes, Jr., Rose Merle Failla, Carolyn, John and Jeanne Nabos, Marcia Grimm, Ronald, Gary, Bruce and Faye Ellen Furlow, Martha and Joan Jackson, Karen Roberts, Missy Gisclair, Patricia Habeeb, Elizabeth Mahorner, Mary Margaret Ruli, Suzanne Stouse, Foster Hebert, Gary Brewster, Bradley and Charles Farris III, Robert Goldsmith, and Cody Aime Kelleher.

Wed. Jan. 9th is the date of the next Auxiliary meeting.

Mrs. Beryl Kelleher,
Publicity Chairman

BOOK REVIEWS

Beyond the Germ Theory; by Iago Galdston, M.D. (ed.), New York, N. Y., Health Education Council, 1954, Pp. 182, $4.00.

This interesting book attempts to describe the roles of deprivation and stress in health and disease. The material is well organized into four sections: (1) Dynamics of deprivation and stress, (2) Nutritional deprivation and stress, (3) Psychological deprivation and stress, and (4) Social stress and deprivation.

Dr. Galdston in the first chapter succinctly summarizes the development of the germ theory. He points out that the concept of homeostasis offers broad utilization of the germ theory and more recent ideas of stress. "To maintain homeostasis . . . man must have access to the balancing factors involved in the process. Unless man can obtain what is required and convert or eliminate what is in excess, he cannot maintain homeostasis—or health. This lays bare a new science of pathology, that of deprivation: disease due to the lack of essentials."

The contributing authors support this thesis with evidence from many branches of medicine: public health, metabolic disorders, obstetrics, psychobiology, internal medicine, and psychiatry. Their writings are stimulating and the book would seem to be an excellent reference for medical students, student nurses and others in the training stages.

IRVIN A. KRAFT, M. D.

Practical Medical Mycology; by Edmund L. Keeney, Springfield, Illinois, Charles C Thomas, 1955, Pp. 145, Price $4.50.

As the publisher has stated, the subject matter is presented in "simple, compact, factual style" which makes the text a good review of a complicated subject The author has perhaps wisely concentrated his efforts toward a concise presentation of epidemiology, clinical picture, and treatment. Mycology per se is very simplified and the forbidding details are omitted.

By this omission, the text alone becomes of limited value to students and teachers of medical mycology. The illustrations which are diagrammatic are next to meaningless unless the reader has a previous knowledge of the organism. With such a knowledge, however, the illustrations readily recall to mind the pertinent points.

LORRAINE FRIEDMAN, PH.D.

PUBLICATIONS RECEIVED

The American Public Health Association, Inc., N. Y.: Services for Children with Hearing Impairment; Services for Children with Vision and Eye Problems.

Grune & Stratton, Inc., N. Y.: Children's Eye Problems, by Emanuel Krimsky, M. D.

Charles C Thomas, Publisher, Springfield, Ill.: Training of the Lower Extremity Amputee, by Donald Kerr, B.B.A., and Signe Brunnstrom, M.A., with introduction by T. Campbell Thompson, M. D.